ENTER FOR INTERNATIONAL EDUCATION AND RESEARCH IN ACCOUNTING



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## EDUCATION AND RESEARCH

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

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V. K. Zimmerman, *Director*

# THE INTERNATIONAL JOURNAL OF ACCOUNTING

## EDUCATION AND RESEARCH

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V. K. Zimmerman, *Editor*
JaNoel S. Lowe, *Assistant Editor*

## *Contents*

# *A Philosophical Perspective on the Development of International Accounting Standards*

WILLIAM J. VIOLET*

Broadly speaking, accounting may be considered as either an art or an applied social science. The author submits that if international accounting standards (IAS) are to be established successfully, the establishment process must be accomplished within the perspective of accounting as a rational system, that is, a system based on a framework of universally accepted postulates. This discussion begins with a brief investigation of the consequences of viewing accounting as an art to illustrate several philosophical and cultural limitations.

Anyone who has attempted to discover the best finish for a piece of fine woodwork would certainly rely on an informal consensus of the generally recognized best practitioners. Where disagreements occur, no satisfactory way of resolving them exists; there are no canons of inquiry, no agreed-upon external standards. Furthermore, the knowledge which is the conceptual substance of the craft is lore — a historical accumulation which neither contains internal standards nor accepts external principles to separate the uselessness from the useful, the good from the bad. For all their theoretical deficiencies, however, the crafts provide beautifully finished furniture.

American accounting has been generally conceived of as an art or craft and has, as a result, the strengths and weaknesses of that conception. Rueschhoff refers to its development as "situationistic":

> The accounting objective also has been fulfilled through situationism. In fact a situationistic approach is common throughout the world (this is the pragmatic development of principles of conventions by individual countries). It

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involves a loose type of structure that develops principles according to the situation. However, over time certain principles become generally accepted. This is the avenue that is prevalent in the United States.[1]

Although pragmatically derived accounting principles are quite satisfactory for what they are currently expected to accomplish, this trial-and-error method of developing principles has two severe flaws. First, the amassed results are often incoherent. R. J. Chambers has commented on the development and evolution of "generally accepted accounting principles."

> In all scientific, or otherwise disciplined pursuits, we proceed by what is loosely called "trial and error." If anything "tried" turns out to be in "error," because it does not procure what it is expected to procure, it is regarded as "on trial" until something else is found that is "less in error." The object of all research and development is to replace what is less effectual by something more effectual in bringing about what is desired or intended. The process has been described as a process of finding successively better approximations to an ideal — whether an ideal tool, an ideal programme or an ideal theory. It entails the search for flaws in a device or practice, the search for means of reducing those flaws and the rejection of devices or practices (or parts of them) which are "more-flawed" in favor of others that are "less-flawed."
>
> This has not been the method characteristic of accounting. The accounting method has been rather a method of trial and error-accretion. By no other method could there have been developed such a diverse and numerous set of rules or practices as those now available and permissable.[2]

The second flaw is that the trial-and-error results are tied to a specific culture and are, therefore, incapable of evolving into IAS.

American accountants have begun to realize the perceptual effects and behavioral limitations generated by generally accepted accounting principles (GAAP). As the American system transcends national borders into the complex international environment, the utility of GAAP greatly decreases. IAS are a necessity for multinational reporting of international transactions.

As cultures vary, so do accounting theories and applications. Because of this conceptual diversity, the establishment of IAS has met with limited success. Principles pragmatically developed in response to the needs of national users suffice for most domestic accounting applications. Because of the inherent limitations of accounting principles based on experience-oriented domestic systems, a domestic accounting system is useful beyond its national borders only to the extent that another country has a similar accounting system. Multinationals, like individual

[1] Norlin Rueschhoff, *International Accounting and Financial Reporting* (New York: Praeger, 1976), p. 147.

[2] R. J. Chambers, "Usefulness — The Vanishing Premise in Accounting Standards Setting," *ABACUS* (December 1979): 71-73.

nations, are continually confronted with a dilemma of diverse accounting systems, and the utility of reported financial data for various creditors, owners, and users decreases. IAS have attempted to rectify this situation; however, they are being established without a postulate framework as a reference point. A pragmatically developed international accounting system is even more questionable than a pragmatically developed domestic accounting system. If IAS are the forerunners of international accounting uniformity and theory, they must be developed from a postulate structure based on logic and scientific methodology. The question is whether IAS are intended to reflect universal truths or postulates of accounting. If IAS are to be truly world oriented, they must have the quality of universality. Postulates should be developed for establishing international principles and accounting standards. To be relevant to the world community and adaptable to international processes, IAS must be based on a sound conceptual, postulate basis. No individual domestic accounting system, developed on experience or pragmatism, could lead to the development of IAS. Pragmatically developed IAS will not be able to cope with infinite cultural diversity. It would be more effective for international accounting theories to conform conceptual differences before trying to resolve practice variances. An international system of accounting able to contend with the complexities facing nations and multinationals requires the establishment of universal postulates from which truly international "generally accepted accounting principles" and standards may be promulgated.

A pragmatic solution can neither resolve current variances nor cope with the dynamic international environment of the future; it can only extend the conventions or principles employed by a particular member nation such as the "generally accepted accounting conventions" employed in the United States into the international accounting environment. Such conceptual incoherence and the problems created could be resolved by considering accounting as a rational system which should have evolved from a postulate base.

In response to theoretical criticism demanding a closer alliance between accounting as a defined rational system and scientifically oriented research, accounting theory evolved from deductive relationalization, based on empirical research directed at supporting underlying premises and theories.

That accounting is not a science like physics does not deter it from functioning as an applied social science. Social sciences are not so much concerned with discovering absolute truths as with frequencies of occurrence and interrelationships between phenomena. Therefore, social

scientists direct their efforts toward examining causal patterns (cause and effect) and functional analysis.

Functional analysis illustrates how components work together to support the structural whole and maintain systemic relationships and continuity. Functional explanation, unlike causal explanation, requires no time sequence; it is synchronic explanation.[3]

Both of these conceptual models are employed to explain phenomena. Phenomena are the focal points for observation and developing postulates for deriving principles. If accounting is an applied social science, it is subject to scientific criticism from a philosophical standpoint.

Accounting theory has developed pragmatically.[4] As a rational system parallel to the sciences, however, accounting, to be a meaningful discipline, must abide by a universal rationale found in all sciences. As a rational deductive system concerned with social phenomena, accounting is subject to certain scientific constraints affecting all sciences. Several parameters affecting any rational system can be demonstrated, but limits of space restrict consideration to one illustrative parameter only, the concept of measurement.

Paul Durbin introduces the importance of measurement as a concept:

Measurement is a foundation stone of the edifice of modern science, along with the experimentation so often necessary for exact measurement. It was exact measurement that made the difference between Galileo and the Aristotelians of his day; his "new sciences" were distinctive precisely insofar as they gave preeminence [*sic*] to mathematical-measurable effects.[5]

As M. R. Cohen and Ernest Nagel demonstrate, however, the concept of measurement is not a simple one:

Comparisons based upon counting . . . depend on our ability to distinguish clearly between different groups or different characters. Frequently, however, characters cannot be sharply distinguished because they form a continuous series with one another. Thus we may wish to distinguish different knives on the basis of their "sharpness." . . . What principles must we observe in using numbers to denote such differences in qualities?

It is often believed that because we can assign numbers to different degrees of a quality, the different degrees always bear to each other the same ratio as do the numbers we have assigned to them. . . .

We must note that numbers may have at least three distinct uses: (1) as tags, or identification marks; (2) as signs to indicate the position of the degree of

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[3] Merwyn Garbarino, *Sociocultural Theory in Anthropology* (New York: Holt, Rinehart and Winston, 1977), p. 7.

[4] For a discussion on pragmatic development, see Maurice Moonitz, "Why Do We Need 'Postulates' and 'Principles?' " *Journal of Accountancy* (December 1963).

[5] Paul Durbin, *Philosophy of Science: An Introduction* (New York: McGraw-Hill, 1968), p. 126.

a quality in a series of degrees; and (3) as signs indicating the quantitative relations between qualities. . . .

We must make sure that we do not allow different numbers to be assigned to the same object. Thus suppose the weight of object A is regarded as the unit or 1, and that we can assign weights to other objects by this process so that $A_2$ will have weight 2, $A_4$ weight 4, and $A_6$ weight 6. Can we be sure that $A_2$ and $A_4$ placed together in one pan will just balance $A_6$ placed in the other? It is very important to note that we cannot be certain of this until we perform the experiment. The proposition that $2 + 4 = 6$ can be demonstrated in pure arithmetic without experiment. But until we perform the proper experiments we cannot be certain that the physical operation of addition of weights does conform to the familiar properties of pure arithmetical addition.[6]

The subject of accounting has always been concerned with the concept of measurement against some rationally developed standard. Several noted accounting authors have questioned the qualities of measurement as applied in their field. For example, Chambers questions the extensive or additive properties presented in a balance sheet. Is it conceptually correct to add current assets to fixed assets for presenting the economic resources available to an entity? Chambers discusses at length the fallacy of adding various elements of a balance sheet.

All allusions to financial position, and the general practice of drawing up balance sheets, entail that what is represented is aggregative. The aggregate amounts of assets, liabilities and owners' equity are determined; and there are subaggregates in each case. In the context of a double-entry system, balance sheet aggregations may be thought simply to be a check on the mechanical completeness of the record. But aggregation has a more substantial justification.

The very use of class names, "assets," "liabilities" and "owners' equity," implies that the amounts by which the items in each class are represented are homogeneous amounts, properly aggregable (or subtractable). APBS4 describes owners' equity as the excess of assets over liabilities (par. 132), and net income as "the net increase in owners' equity . . . from profit-directed activities" (par. 134). If the amounts of the three classes (and of net income) were not homogeneous, the differences would not be valid differences. All the documents, whether explicit about the matter or not, contemplate that users of financial statements are concerned with aggregates, and in particular, with the financial positions of whole enterprises. . . .

An aggregative position cannot be represented by improper aggregations. Yet APBS4 and all practice under generally accepted accounting principles tolerate improper aggregation. . . .

Other fictions, of course, contribute to the fictional character of aggregates under generally accepted accounting principles. Allocations give rise to fictions: a lower of cost and market valuation is a fiction: a valuation based

[6] M. R. Cohen and Ernest Nagel, *An Introduction to Logic and Scientific Method* (New York: Harcourt, Brace and World, 1934), pp. 293-97.

on straight-line depreciation or any other calculation by formula is a fiction. The burden of demonstrating that they are serviceable fictions, for balance sheet purposes, rests on their supporters.[7]

James A. Schweikart discusses particular factors affecting the concept of measurement in the international setting:

Foreign subsidiaries operate in different legal, social, political and economic environments. Not only does this situation affect the accounting principles which are applied, but also the meaning of values attached to assets and expenses is affected. For example, in West Germany a building may cost $575,000. The same building may cost $300,000 in South Korea. What value should be attached to these two assets? . . .

Another facet of the foreign operating environment is the risk of assets abroad. Do the assets located abroad really have any values? . . .

Therefore, incomes with the esoteric meanings and assets with their unknown true values are included in U.S. consolidated statements as if they are U.S. assets and U.S. incomes.[8]

Even within our own system, the concept of measurement employing the dollar as a measuring unit is troubling, as Herbert Taggart points out:

Accountants are as aware as anyone that it is absurdity to deduct peaches from apples and expect to get an intelligible answer. It is most uncomfortable for the accountant to be told that he is performing equally futile arithmetic when he adds or subtracts dollars spent at different times and representing differing purchasing power. It is no wonder that accountants have by tradition stubbornly ignored changes in the magnitude of their measuring unit. To give in on this point cuts the very foundations of their beliefs from under them. . . .

Continued failure to give expressions to the profound and prolonged change in the price level has led to much misinterpretation of financial statements, and especially of the statement of income.[9]

In addition to the constraint of measurement, a myriad of other constraints governing science and accounting exists. Accounting as a rational system must obey the "laws" of logic for presenting valid and relevant data. Science has accepted, as a matter of practicality and necessity, "certain a priori" truths which it does not attempt to test, although metaphysically such theories or assumptions will continue as matters of conjecture and controversy. Such truths have evolved into postulates. Postulates are necessary to provide relevant data. Postulates demand logical reasoning and form a base for empirical testing. They

[7] Chambers, "Usefulness — The Vanishing Premise," pp. 77-79.

[8] James A. Schweikart, "We Must End Consolidation of Foreign Subsidiaries," *Management Accounting* (August 1981): 17.

[9] Herbert Taggart, "Sacred Cows in Accounting," *Accounting Review* (July 1953): 315-16.

permit and necessitate a conceptual conformity between all the sciences and allow for the development of new sciences or rationally applied systems, such as accounting. Logic entails a set of postulates to formulate accounting principles. Maurice Moonitz, a pioneer in the research for a set of accounting postulates, stated several years ago:

For many years now, the expressed policy of the American Institute of CPAs in the field of accounting has been to determine appropriate practice and to narrow the areas of difference and inconsistency in practice. . . .

In essence this new approach contemplated the formulation of a "fairly broad set of co-ordinated accounting principles" on the basis of a previously established set of postulates. The postulates and principles taken together would then serve as a "framework of reference" for solving specific issues and detailed problems. . . . Clearly, then, the special committee expected . . . to seek the help of logic in determining the "rules of accounting."

In this respect accounting is merely repeating the history of many other fields. Up to a certain point, experience is the touchstone that solves problems and does it in a satisfactory manner, but beyond that point, more is needed.[10]

What this "more" is becomes clearer from Moonitz's comments on Accounting Research Study No. 1:

. . . research study (Accounting Research Study No. 1) took the form of a search for "self-evident propositions," for assertions about the environment in which accounting functions. . . .

As was to be expected, certain issues kept recurring in all sorts of situations, for example, income determination, financial position, control over goods and services, etc. These leads were pursued into the business, economic, and political setting in which accounting operates. A vast amount of evidence had to be reviewed and sifted to obtain the relatively few usable propositions that were reported in the published study.

To be fruitful, the postulates of accounting must of necessity relate to [be inferred from] a world that does exist and not to one that is a fiction. It may not ever be possible to demonstrate the "truth" of a postulate because no one person or group can possess all the necessary knowledge, (this is a philosophical deduction; complete understanding of any element, cause, or event would be absurd) but the proposition set forth as a postulate must be plausible and must rest upon a large amount of positive factual knowledge of the environment in which accounting functions.

Once the basic inferences are drawn they become obvious [self-evident?] to everyone and serve as a starting point from that time on. In this light, accounting postulates may be viewed as the inferences drawn from the mass of data concerning the environment in which accounting functions.[11]

Even if accounting is not a science, it is, after all, a rational system aligned with science. To exist as a rational system reporting on social phenomena through discovery, observation, explanation, confirmation,

[10] Moonitz, "Why Do We Need 'Postulates,' " p. 42.
[11] Ibid., pp. 44-45.

and prediction, accounting will eventually need to establish a set of postulates for operating in a complex, dynamic environment.

Repeatedly, scientists are required to apply theory to reality. Often theoretical application must be modified to adapt simplistic theory modeling to the infinite complexities of a dynamic environment. To ensure continual development of science in its quest for truth, the theoretical framework of science must not be rigid but must have an underlying structure combining short-run stability with long-run flexibility. To ensure adaptability from the conceptual plane to reality, science must operate from a set of postulates. The postulates form the foundation of science and provide the framework for continual modification.

To facilitate the domestic beneficiaries (practitioners), accounting theory currently employs a pragmatic or practical orientation for establishing so-called "generally accepted accounting principles." Continued use of such a practice will, however, limit the capacity of accounting theory to resolve the more complex issues it will eventually face.

At the domestic level, pragmatic application can be satisfactorily utilized. The proximity of the theoretician, practitioner, and a domestic environment enhances the pragmatic (or trial and error, through experience) development of accounting principles. Such pragmatically developed "generally accepted accounting principles" are domestic conventions. Moonitz clarifies the term "conventional" as it relates to accounting.

> Accounting is often described as "conventional" in nature, and its principles as "conventions." These two terms, conventions and conventional, are ambiguous; the statement that accounting is conventional may be true or false depending on which meaning is intended. It is true if it refers to such things as the use of Arabic numerals, the use of the dollar sign, or the sequence in which assets, liabilities, revenues, and expenses are listed in financial statements because other symbols and forms could be used to convey precisely the same message. It is not true if the statement means that any proposition which accountants accept is a valid one. . . .
>
> Suppose, however, that the assertion about accounting principles as "conventions" is intended to convey the idea that they are generalizations, inferences drawn from a large body of data, and that they are not intended to be literal descriptions of reality. "Conventions" and "conventional" are clearly valid descriptions, then, but not because accounting is unique. Instead, accounting is like every other field of human endeavor in this one respect: its basic propositions are generalizations or abstractions and not minute descriptions of every aspect of "reality."[12]

Principles originally developed from experience may resemble principles formulated from a set of postulates; however, since no framework

[12] Ibid., pp. 45-46.

exists for postulate-to-principle sequential development and modification, environmental influences will greatly affect the evolution of the originating principles. Domestic pressures create an environment contra-productive to future postulate creation. Further, the pragmatic development conventionalizes domestic "generally accepted accounting principles." The pragmatic principles become "conventions" of a particular sociopolitical entity. The "generally accepted accounting principles" are not principles but conventions of a particular society.

Our generally accepted accounting principles, the product of the highly technological environment of the United States, are not generally accepted by the great majority of other countries, and diverse accounting principles in various developmental stages occur throughout the world.

Cultural diversity inhibits the establishment and enforcement of IAS. Current approaches for harmonization of accounting practices have advocated understanding accounting differences. A more acceptable or meaningful approach would be to strive for harmonization based on a knowledge of cultural differences. We cannot expect accounting as a reflection of a particular society to have exactly the same objectives from one culture to another.

Further, a postulate framework for accounting, specifically, international accounting, must be developed to facilitate the development of international accounting standards. Such a structure would provide the necessary flexibility for developing and employing IAS in diverse cultural settings. This framework would also establish and clarify accounting concepts throughout the accounting environment. The profession needs this added clarity. A postulate structure will clarify theoretical positions, and such a step is a necessary precondition to harmonizing international theories and variances.

A framework of universal postulates will also promote and enhance an understanding of cultural determinants and variables. A knowledge of cultural relativity will assist the International Accounting Standards Committee in defining the cultural requirements which must be met before IAS can be universally accepted, established, and enforceable.

## SELECTED BIBLIOGRAPHY

### Articles

Ahmed Belkaoui. "The Interprofessional Linguistic Communication of Accounting Concepts: An Experiment in Sociolinguistics." *Journal of Accounting Research* (Autumn 1980): 362-74.

Sir Henry Benson. "International Accounting — The Challenges of the Future." *Journal of Accountancy* (November 1977): 93-96.

Lee Berton. "Arthur Young Professors' Roundtable: The International World of Accounting." *Journal of Accountancy* (August 1980): 74-79.

Jan G. Brown. "The Development of International Accounting Standards." *Woman CPA* (October 1977): 9-11.

R. Lee Brummet. "Internationalism and the Future of Accounting Education." *International Journal of Accounting* (Fall 1975): 161-66.

R. J. Chambers. "Usefulness — The Vanishing Premise in Accounting Standards Setting." *ABACUS* (December 1979): 71-92.

Frederick Choi. "Primary-Secondary Reporting: A Cross-Cultural Analysis." *International Journal of Accounting* (Fall 1980): 83-104.

Alvin Clay. "Undergraduate International Accounting Education." *International Journal of Accounting* (Fall 1975): 187-92.

Percy Cohen. "Economic Analysis and Economic Man." *Themes in Economic Anthropology*. New York: Travistock Publications, 1967, pp. 91-117.

Joseph Cummings. "The International Accounting Standards Committee: Current and Future Developments." *International Journal of Accounting* (Fall 1975): 31-38.

———."Progress in the Establishment and Enforcement of International Accounting Standards." *Accounting Forum* (May 1976): 1-6.

Irving Fantl. "Frustrations Facing Accounting Uniformity." *Accounting Forum* (May 1976): 27-31.

E. Flamholtz and E. Cook. "Cognitive Meaning and Its Role in Accounting Change: A Field Study." *Accounting Organizations and Society* (October 1978): 115-40.

Henry Hatfield. "An Historical Defense of Bookkeeping." *Journal of Accountancy* (April 1924): 241-53.

Donald Hayes. "The International Accounting Standards Committee — Recent Developments and Current Problems." *International Journal of Accounting* (Fall 1980): 1-10.

John Hepworth. "International Accounting Standards." *Chartered Accountant in Australia* (August 1977): 17-19.

William S. Kanaga. "International Accounting: The Challenge and the Changes." *Journal of Accountancy* (November 1980): 55-60.

Alexander Keyserlingk. "International Public Accounting: An Underdeveloped Profession." *International Journal of Accounting* (Fall 1975): 15-22.

Robert Libby. "Bankers' and Auditors' Perceptions of the Message Communicated by the Audit Report." *Journal of Accounting Research* (Spring 1979): 99-122.

J. N. Miles. "The Development of International Accounting Standards." *Chartered Accountant in Australia* (August 1978): 26-32.

Steven Mintz. "Internationalization of the Accounting Curriculum." *International Journal of Accounting* (Fall 1980): 137-52.

Maurice Moonitz. "Why Do We Need 'Postulates' and 'Principles'?" *Journal of Accountancy* (December 1963): 42-46.

Gerhard Mueller. "The Dual System for Transnational Financial Reporting." *Accounting Forum* (May 1976): 17-25.

———. "International Accounting Standards." *Accountant* (October 1977): 446-49.

Walter O'Conner. "The Multinational Corporation and the Developing Country." *Accounting Forum* (May 1976): 33-40.
Bruce L. Oliver. "Semantic Differential: A Device for Measuring the Interprofessional Communication of Selected Accounting Concepts." *Journal of Accounting Research* (Autumn 1974): 229-316.
James Schweikart. "We Must End Consolidation of Foreign Subsidiaries." *Management Accounting* (August 1981): 15-18.
Michael Silverstein. "Shifters, Linguistic Categories and Cultural Description." *Meaning in Anthropology*. Albuquerque: University of New Mexico, 1976, pp. 11-56.
Robert Sterling. "Accounting Research, Eduation and Practice." *Journal of Accountancy* (September 1973): 44-52.
Washington Sy Cyp. "Establishing and Applying Standards in Diverse Economic and Social Environments." *International World of Accounting Challenges and Opportunities,* ed. by John Burton. New York: Arthur Young, 1981, pp. 85-96.
Herbert Taggart. "Sacred Cows in Accounting." *Accounting Review* (July 1953): 313-19.
Arthur Young and Co. "Keeping Up-to-Date with International Accounting Developments." *Arthur Young Client Memorandum* (March 21, 1980): 1-19.
Stephen A. Zeff. "Chronology of Significant Developments in the Establishing of Accounting Principles in the United States, 1926-1972." *Journal of Accounting Research* (Spring 1972): 217-27.

**Books**

Accountants International Study Group. *International Financial Reporting Study No. 11.* Toronto: AISG, 1975.
American Accounting Association. *A Statement of Basic Accounting Theory.* Evanston, Ill.: AAA, 1966.
American Institute of Certified Public Accountants. *Professional Standards,* vol. 3. New York: Commerce Clearing House, 1981.
Association of Social Anthropologists of the Commonwealth. *Themes in Economic Anthropology.* London: Travistock Publications, 1967.
Anthropological Society of Washington. *Anthropology and Human Behavior.* Washington, D.C.: ASW, 1962.
Keith Basso and Henry Selby. *Meaning in Anthropology.* Albuquerque: University of New Mexico, 1976.
Ruth Benedict. *Patterns of Culture.* Preface by Margaret Mead. Boston: Houghton Mifflin Company, 1934.
Franz Boas. *Social Evolution.* Cleveland: Meridan Publishing, 1963.
James A. Boon. *From Symbolism to Structuralism.* New York: Harper and Row, 1972.
Michael Chatfield. *Contemporary Studies in the Evolution of Accounting Thought.* Belmont, Calif.: Dickenson Publishing, 1968.
Irvin Child and John Whiting. *Child Training and Personality: A Cross-Cultural Study.* New Haven: Yale University Press, 1953.
M. R. Cohen and Ernest Nagel. *An Introduction to Logic and Scientific Method.* New York: Harcourt, Brace and World, 1934.

Paul R. Durbin. *Philosophy of Science an Introduction.* New York: McGraw-Hill, 1968.

Raymond Firth, ed. *Themes in Economic Anthropology.* New York: Travistock Publications, 1967.

Merwyn S. Garbarino. *Sociocultural Theory in Anthropology.* Edited by George and Louise Spindler. New York: Holt, Rinehart and Winston, 1977.

Clifford Geerty. *The Interpretation of Cultures.* New York: Basic Books, 1973.

Ernest Hilgard, Richard Atkinson, and Rita Atkinson. *Introduction to Psychology.* 6th ed. New York: Harcourt, Brace, Jovanovich, 1975.

E. Adamson Hoebel. *Anthropology: The Study of Man.* 4th ed. New York: McGraw-Hill, 1972.

Conrad P. Kiltak. *Anthropology, the Exploration of Human Diversity.* New York: Random House, 1974.

Elsa P. Kimball. *Sociology and Education: An Analysis of the Theories of Spencer and Ward.* New York: AMS Press, 1968.

Adam Kuper, ed. *The Social Anthropology of Radcliffe-Brown.* London: Routledge and Kegan Paul, 1977.

Claude Levi-Strauss. *Structural Anthropology.* New York: Basic Books, 1963.

Bronislaw Malinowski. *A Scientific Theory of Culture and Other Essays.* Preface by Huntington Cairns. Chapel Hill, N.C.: University of North Carolina, 1944.

John S. Mill. *Auguste Comte and Positivism.* Ann Arbor: University of Michigan, Toronto Ambassador Books, 1961; Ann Arbor Paperbacks, 1961.

Gerhard Mueller. *Accounting Practices in the Netherlands.* Seattle: University of Washington, 1962.

———. *Accounting Practices in West Germany.* Seattle: University of Washington, 1964.

———. *International Accounting.* New York: Macmillan, 1967.

Gianfranco Poggi. *Images of Society.* Stanford: Stanford University, 1972.

Price Waterhouse and Co. *Guide for the Reader of Foreign Financial Statements.* Edited by George Watt. 2nd ed. New York: Price Waterhouse and Co., 1975.

Norlin Rueschhoff. *International Accounting and Financial Reporting.* New York: Praeger, 1976.

Edward Sapir. *Culture, Language and Personality.* Berkeley: University of California, 1958.

———. *Language.* New York: Harcourt, 1921.

George Scott. *Accounting and Developing Nations.* Seattle: International Accounting Studies Institute and University of Washington, 1970.

Herbert Shenton, Edward Sapir, and Otto Jespersen. *International Communication.* London: Kegan Paul, Trench, Trubner and Co., 1931.

W. Stark. *Montesqieu Pioneer of the Sociology of Knowledge.* Toronto: University of Toronto, 1961.

Edward Tylor. *Researches into the Early History of Mankind and the Development of Civilization.* Edited by Paul Bohannan. Chicago and London: University of Chicago Press, University of Toronto, 1964.

Anita Tyra. *Companies, Laws, and Financial Reporting: West Germany, France, and the United Kingdom.* Seattle: University of Washington, 1971.

Leslie A. White. *The Science of Culture.* New York: Farrar, Straus and Company, 1949.
B. L. Whorf. *Language, Thought and Reality.* Cambridge: MIT Press, 1956.
Arthur Young. *The International World of Accounting Challenges and Opportunities.* Edited by John Burton. New York: Arthur Young, 1981.
V. K. Zimmerman, ed. *The Multinational Corporation: Accounting and Social Implications.* Urbana, Ill.: University of Illinois, 1977.

# *International Accounting: A Review of Academic Research in the United Kingdom*

S. J. GRAY*

While "international accounting" is by no means a new area of study, its significance has grown enormously, concurrently with the explosion in international business activity, over the last two decades. International accounting has also become increasingly complex and diverse, reflecting the many new issues that have emerged and the new dimension that has been added to the already familiar issues in the domestic context.

This paper reviews U.K. research in the field of international accounting. In contrast to a recent wide-ranging review by Mueller,[1] who provided illustrations of research of varied national origin, this study will be restricted to work by U.K.-based writers from 1970 to 1981, inclusive. The extent of development of the subject in the U.K. context will be appraised.

## WHAT IS MEANT BY INTERNATIONAL ACCOUNTING?

To determine the boundaries of international accounting is not easy. For the purpose of this review, international accounting will be broadly defined to include managerial decision making, as well as the related financial accounting and reporting perspectives. An additional requirement for research to be considered "international" in the U.K. context

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[1] Gerhard G. Mueller, "The State of the Art of Academic Research in Multinational Accounting," in *Internationalization of the Accounting Profession,* ed. W. John Brennan (Canadian Institute of Chartered Accountants, 1979), pp. 83-97.

was that it either related to accounting in countries other than the United Kingdom or to an accounting issue, such as foreign exchange, which is unique to international business risk.

The scope of some recent books on international accounting, such as those by Choi and Mueller,[2] Arpan and Radebaugh,[3] and Nobes and Parker,[4] were studied. These studies were complemented by a survey by Schoenfeld.[5] There was a surprising degree of agreement between these writers on the areas which constitute international accounting.

Nobes and Parker[6] restricted the scope of their book largely to the financial reporting aspects of the subject. Topics included a comparative analysis of accounting theory and practice at the national level (including historical evolution), the classification of accounting systems according to patterns of development, problems of harmonization and international standards, financial accounting and reporting issues for multinational operations including consolidations, foreign currency translation and inflation accounting, and finally the classification and harmonization of taxation systems.

Choi and Mueller,[7] Arpan and Radebaugh,[8] and Schoenfeld[9] extended the scope of international accounting to include disclosure issues, such as segmental reporting, social reporting (including value added statements and social balance sheets), and forecasts. Auditing, including operational internal auditing, is another dimension. An additional dimension is the major perspective of managerial decision making which includes topics, such as foreign investment decisions, capital budgeting and long-term financing, foreign exchange exposure measurement and risk management, transfer pricing, and performance evaluation and control systems. Public sector accounting is an additional dimension of international accounting and includes comparative aspects of national systems, and accounting for government agencies and enterprises.

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[2] Frederick D. S. Choi and Gerhard G. Mueller, *An Introduction to Multinational Accounting* (Englewood Cliffs, N.J.: Prentice-Hall, 1978).

[3] Jeffrey S. Arpan and Lee H. Radebaugh, *International Accounting and Multinational Enterprises* (Boston: Warren, Gorham and Lamont, 1981).

[4] C. W. Nobes and R. H. Parker, eds., *Comparative International Accounting* (London: Philip Allan, 1981).

[5] Hanns-Martin W. Schoenfeld, "International Accounting: Development, Issues and Future Directions," *Journal of International Business Studies (Fall 1981)*: 83-100.

[6] Nobes and Parker, *International Accounting.*

[7] Choi and Mueller, *Multinational Accounting.*

[8] Arpan and Radebaugh, *International Accounting.*

[9] Schoenfeld, "International Accounting: Issues."

**WHAT IS MEANT BY "RESEARCH"?**

After determining the scope of international accounting, the determination of what "research" means for the purpose of this review is necessary. The belief that research should provide a contribution to knowledge is well accepted. An element of originality is essential. Research should help to explain significant problems or phenomena and predict likely outcomes. Research may follow a variety of approaches — the relative value of each being a subject of some controversy.[10] In general, most research can be classified by type as either a priori, empirical, or a combination of both.[11]

A priori means research that is analytical in that the emphasis is on the logical deduction of hypotheses/conclusions from assumptions or generalizations concerning the world that may or may not be derived from actual observations. The hypotheses or conclusions from analysis of this kind may be tested by reference to practice or may serve as "normative" prescriptions for desirable practice. Empirical research, on the other hand, usually denotes a concern either with the testing of hypotheses derived from a priori research or the development of "descriptive" generalizations using observations of actual behavior and events. Such observations may be made directly in the context of field studies or indirectly through questionnaire surveys, interviewing, experiments, and archival data analysis. A more qualitative approach to empirical research may include participant observation of behavior in order to gain insight and understanding of particular situations.[12]

Knowledge that is already publicly available is by definition excluded from being considered as research, regardless of method, unless a fresh interpretation of existing data is provided or data from disparate sources are brought together and analyzed in a new form.

In the field of international accounting, research could be expected to take the form of descriptions of accounting systems and their development at the national level in a variety of countries, of comparative analyses of national systems using empirical data concerning accounting and reporting practices, of a priori arguments concerning the desirability of international accounting standards, of comparative analyses of financial reporting theories and practices regarding specific issues, such as foreign currency translation, consolidations and segmental reporting,

[10] M. Blaug, *The Methodology of Economics* (Cambridge: Cambridge University Press, 1980).
[11] G. Burrell and G. Morgan, *Sociological Paradigms and Organizational Analysis* (London: Heineman, 1979).
[12] Gareth Morgan and Linda Smircich, "The Case for Qualitative Research," *Academy of Management Review* (1980): 491-500.

and the development of ideas in the area of managerial decision making to solve problems relating to foreign investment decisions, long-term financing, foreign exchange risk management, and performance evaluation and control, together with empirical analyses of managerial behavior in practice.

Many different types of research can provide contributions, of varying degree, to an enhanced understanding of the practice of accounting in an international context, to an explanation of the current state of development, to predictions of what may occur in the future, and to the development of policy. Different methods, as well as different approaches to research, can be used according to the specific nature of the problem to be investigated.

Because research is valued essentially for its contribution to knowledge, the main sources for this review are works published in academic journals which routinely and independently evaluate research. Books will also be included although it is recognized that to the extent they are textbooks, they will include research findings already reported. There are undoubtedly occasional cases of original contributions being published in professional journals. Such journals, however, normally are a vehicle to communicate more widely the research findings already publicly available. More commonly, the function of the journals is to report recent events and developments from the perspective of practice. Thus, works published in professional journals will be included only when they are widely cited in the academic literature. Unpublished work in process will not be included in this review. Some reference to current interests in research will be made in the concluding section of this review.

## INTERNATIONAL ACCOUNTING RESEARCH IN THE UNITED KINGDOM FROM 1970 TO 1981

International accounting is classified into four main subjects: (1) comparative international accounting, (2) international accounting harmonization, (3) international financial reporting issues, and (4) managerial decision making and financial control in the international context. This is a personal perception of significant areas of study, but it provides a comprehensive framework to classifying the works. This approach may be compared to that of Mueller,[13] who classified research by type: descriptive, comparative, empirical, traditional normative, bibliographical-historical, and behavioral.

[13] Mueller, "Academic Research in Multinational Accounting," pp. 83-97.

**Comparative International Accounting**

Comparative international accounting is defined to include the description and analysis of accounting systems at the national level, including their historical evolution; comparative analyses of national systems of accounting and financial reporting; and the classification of accounting systems according to patterns of development.

Parker made an important early contribution by identifying significant international aspects of accounting with special reference to the historical evolution of accounting from one country to another, to the relevance of comparative analysis in understanding and resolving problems at the national level, to the importance of developments at the intergovernmental level of the European Economic Community, and to the emergence of multinational enterprises.[14]

A major event in the development of the subject was undoubtedly the entry of the United Kingdom into the European Community (EEC) in 1973. Until then, there were very few studies of accounting in other countries, particularly comparative analyses or evaluations of international harmonization issues.

Work in the very early 1970s indicated an interest in the United States and the Soviet Union. Leach reviewed the differences between U.S. and U.K. approaches to regulation with the conclusion that geographical, constitutional, and procedural differences indicated that a Securities Exchange Commission was unnecessary in the United Kingdom, although it may work well in the U.S. situation.[15] He expressed preference for self-regulation by means of the stock exchange and the development of professional accounting standards. Kirkman compared financial reporting in the United States with that in the United Kingdom, using the surveys of practices published by the American Institute of Certified Public Accountants and the Institute of Chartered Accountants in England and Wales, respectively.[16] He argued that the United Kingdom had much to learn from the United States with special reference to reporting cost of sales, the disclosure of stock valuation and depreciation methods, and the provision of information regarding sources and uses of cash and working capital.

The nature of financial management and accounting systems in Soviet enterprises was also of interest. Maunders reviewed the role of

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[14] R. H. Parker, "Some International Aspects of Accounting," *Journal of Business Finance* (Winter 1971): 29-39.

[15] Ronald Leach, "Is a British S.E.C. Required to Improve Financial Reporting? A British Professional View," *Journal of Business Finance* (Winter 1970): 24-33.

[16] P. R. A. Kirkman, "What Can We Learn from Published Accounts in the USA?" *Accounting and Business Research* (Autumn 1971): 329-34.

accounting and its effect on decision making in the context of the economic reforms of 1965 with the overall conclusion that financial management practices were very much influenced by political developments.[17] In providing an analysis of planning and control, investment appraisal, and special decisions in Soviet enterprises, the study noted the considerable difficulties in obtaining evidence of actual practices. Bailey provided an exposition of the standardized system of accounting developed for Soviet enterprises and indicated that this could be explained by the emphasis on central planning and control for economic and fiscal purposes.[18] The Soviet approach was briefly compared with the standardized systems operating in France and Germany.

Interest in accounting in Continental Europe really became evident only by mid-1970s following the entry of the United Kingdom into the EEC. McLean provided a useful early contribution in the form of a collection of studies of company regulation, accounting and financial reporting, and industrial and financial developments in the EEC.[19] A study by T. A. Lee outlining and comparing the nature and development of the public accountancy profession in Belgium, Denmark, France, the Netherlands, Italy, Luxembourg, and West Germany[20] was particularly noteworthy and included data on the relative size of the profession, membership requirements, and members qualified to audit. Parker also briefly compared accounting in the United Kingdom with that in other EEC countries, especially in reference to the influence of environmental differences.[21]

Books by Lafferty and Oldham provided descriptions of accounting in a number of European countries.[22] Lafferty provided brief outlines of accounting in France, Germany, the Netherlands, Belgium, Luxembourg, Denmark, Italy, Ireland, and the United Kingdom. Besides accounting and financial reporting, the form of business organization, the accountancy profession, auditing, and issues of EEC harmonization

[17] K. T. Maunders, "Financial Management in the Soviet Industrial Enterprise," *Accounting and Business Research* (Autumn 1972): 298-397.

[18] D. T. Bailey, "Enterprise Accounting in the USSR," *Accounting and Business Research* (Winter 1973): 43-59.

[19] Alasdair T. McLean, ed., *Business and Accounting in Europe* (London: Saxon House, 1973).

[20] T. A. Lee, "Public Accounting in the EEC," in *Business and Accounting in Europe*, ed. A. T. McLean (London: Saxon House, 1973), pp. 61-97.

[21] R. H. Parker, "British Accounting and the EEC," in *Business and Accounting in Europe*, ed. A. T. McLean (London: Saxon House, 1973), pp. 111-20.

[22] M. Lafferty, *Accounting in Europe* (London: Woodhead-Faulkner, 1975); and K. Michael Oldham, *Accounting Systems and Practice in Europe* (Gower Press, 1975).

were reported. Oldham provided a similar review of European accounting systems at the national level, adding Sweden and Switzerland to those countries covered by Lafferty. He also included additional comparative and analytical content and attempted to identify patterns of accounting development.

Beeny, Stilwell, and Beeney and Chastney provided more comprehensive in-depth, although largely descriptive, studies of accounting in West Germany, France, Italy, and the Netherlands, respectively, in a series published by the Institute of Chartered Accountants in England and Wales.[23] Each of these books provided information in a common format which included coverage of forms of business organization, taxation, and audit, as well as a detailed review of accounting and financial reporting requirements and practices.

More recently, France and the Netherlands were studied by Nobes and Parker.[24] Carsberg (with Eastergard) provided current outlines of financial reporting in the United States and Canada.[25]

Forrester provided an analysis and evaluation of recent changes in Belgian legal requirements, involving the adoption of a uniform accounting plan, against the historical background of the nation's accounting developments since the Middle Ages.[26]

As Parker noted, the historical perspective is extremely important to understand how and why accounting has developed in any particular country or group of countries. Work in this area, however, has been relatively limited. Italy received some atttention. G. A. Lee translated original material and commented on the Florentine bank ledger fragments of 1211, the earliest surviving commercial accounts in Europe.[27] In a subsequent article, he provided a more comprehensive view of Italian bookkeeping in the thirteenth century and traced its evolution

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[23] J. H. Beeny, *European Financial Reporting — West Germany* (London: Institute of Chartered Accountants in England and Wales, 1975); *European Financial Reporting — France* (London: Institute of Chartered Accountants in England and Wales, 1976); M. I. Stillwell, *European Financial Reporting — Italy* (London: Institute of Chartered Accountants in England and Wales, 1976); J. H. Beeny and J. G. Chastney, *European Financial Reporting — Netherlands* (London: Institute of Chartered Accountants in England and Wales, 1978).

[24] Nobes and Parker, *International Accounting.*

[25] Bryan Carsber and Alf Eastergard, "Financial Reporting in North America" in *Comparative International Accounting,* ed. C. W. Nobes and R. H. Parker (London: Philip Allen, 1981), ch. 2.

[26] David A. R. Forrester, *"Legislation in Process" The Belgian Accounting Revolution and Its Preparation, Issues in Accountability,* No. 4 (Glasgow: Strathclyde Convergencies, 1980).

[27] Geoffrey Alan Lee, "The Florentine Bank Ledger Fragments of 1211: Some New Insights," *Journal of Accounting Research* (Spring 1973): 47-61.

to the emergence of the double-entry principle around 1300.[28] Glautier explored even earlier times with a study of the influence of socioeconomic factors on the development of Roman accounting.[29] Yamey reviewed early accounting contributions from Italy, the Netherlands, Belgium, and Germany, as well as the United Kingdom, concerning the origin and development of bookkeeping and accounting.[30]

Accounting in Germany was the subject of a more recent historical inquiry by Forrester, who provided an illuminating and in-depth analysis of the life and work of Schmalenbach (1873-1955) in the context of a study of the evolution of German business economics and accounting.[31] He also reviewed Continental work on accounting theory, with special reference to Germany, from the perspective of harmonization by mutual understanding, converging concepts, and regulation.[32]

In addition to studies which focus largely on accounting in a particular country, though sometimes in the context of studies of other countries which may thereby facilitate national comparison, there has also been some research which attempts to identify systematically similarities and differences on a more explicitly compartive basis.

T. A. Lee[33] and Oldham[34] gave relatively brief comments on comparative audit and accounting requirements/practices in the form of comparative tables. Gray provided more detailed comparative study of legal requirements in each of the nine EEC countries, together with legal proposals for EEC harmonization.[35]

A number of comparative studies focused on specific aspects of financial reporting. The problem of accounting for price changes and inflation, a major financial reporting issue, will be examined later in more detail. In the context of this review of comparative accounting, however, it is important to note some of the work in this area. Scapens

[28] Geoffrey Alan Lee, "The Development of Italian Book-keeping 1211-1300," *Abacus* (December 1973): 137-55.

[29] M. W. E. Glautier, "Roman Accounting: The Influence of Socioeconomic Factors on the Development of Accounting Concepts," *International Journal of Accounting* (Spring 1973): 59-74.

[30] B. S. Yamey, "Early Views on the Origins and Development of Book-keeping and Accounting," *Accounting and Business Research,* Special Accounting History Issue (1980): 81-92.

[31] David A. R. Forrester, *Schmalenbach and After. A Study of the Evolution of German Business Economies* (Glasgow: Strathclyde Convergencies, 1977).

[32] David A. R. Forrester, "German Principles of Accounting: A Review Note," *Journal of Business Finance and Accounting* (Summer 1977): 257-61.

[33] Lee, "Accounting in the EEC."

[34] Oldham, *Accounting Systems.*

[35] S. J. Gray, *EEC Accounting and Reporting: A Comparative Guide to Legal Requirements,* Occasional Paper No. 12, International Center for Research in Accounting (Lancaster: University of Lancaster, 1973).

provided a comparative survey of inflation accounting approaches in eighteen countries including Argentina, Brazil, Chile, Peru, and Uruguay.[36] Questionnaires were sent to accountants in various countries, in addition to direct inquiries with professional accountancy organizations. Scapens and Sale subsequently provided a comparative analysis of the inflation accounting standards introduced in the United Kingdom and United States.[37] Tweedie reviewed professional proposals and governmental investigations with special reference to the United States, Australia, New Zealand, and South Africa.[38] Kirkham also provided a comparative perspective on this issue with a wide-ranging review of developments in Western Europe, North America, South America, and Australia.[39]

Foreign currency translation is another financial reporting issue which has received some comparative treatment. Parker provided a brief survey of related requirements and practices in France, Germany, the Netherlands, Switzerland, Sweden, and the United States, as well as in the United Kingdom, using examples from company accounts. He concluded that there were considerable variations between countries.[40] More recently, Nobes[41] and Flower[42] provided comparisons and evaluations of developments in the U.S. and U.K. approaches to foreign currency translation.

Group accounting and consolidations have also been studied comparativiely. Parker compared consolidation concepts used in France, West Germany, and the Netherlands, with those used in the United Kingdom.[43] He extended this analysis with explanations of some reasons for differences in consolidation practices in these countries and added

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[36] R. W. Scapens, *The Treatment of Inflation in the Published Accounts of Companies in Overseas Countries,* 2nd ed. (London: Institute of Chartered Accountants in England and Wales, 1976).

[37] Robert W. Scapens and J. Timothy Sale, "Accounting for the Effects of Changing Prices," *Journal of Accountancy* (July 1980): 82-87.

[38] David Tweedie, *Financial Reporting, Inflation and the Capital Maintenance Concept,* Occasional Paper No. 19, International Center for Research in Accounting (Lancaster: University of Lancaster, 1979).

[39] P. R. A. Kirkman, *Accounting under Inflationary Conditions,* 2nd. (London: Allen and Unwin, 1978).

[40] R. H. Parker, "Principles and Practice in Translating Foreign Currencies: An Essay in Comparative Accounting," *Abacus* (December 1970): 144-53.

[41] C. W. Nobes, "A Review of the Translation Debate," *Accounting and Business Research* (Autumn 1980): 421-31.

[42] J. Flower, "Foreign Currency Translation" in *Comparative International Accounting,* ed. C. W. Nobes and R. H. Parker (London: Philip Allan, 1981), ch. 11; idem, *Accounting Treatment of Overseas Currencies* (London: Institute of Chartered Accountants in England and Wales, 1976).

[43] R. H. Parker, "Concepts of Consolidation in the EEC," *Accountancy* (February 1977): 72-75.

the United States, where consolidated accounts were first introduced in the early 1900s.[44] Pendlebury provided a comparative analysis of group accounting in France, West Germany, the United States, and the United Kingdom, including an empirical study of the consolidation practices of a total of seventy-one large companies.[45]

Financial reporting issues were the focus of a number of comparative empirical studies by Gray, who surveyed segmental, forecast, and financial statistics disclosures, respectively, by the 100 largest industrial multinational companies based in the EEC.[46] It was apparent from the statistical analyses of comparative reporting frequencies (in respect to segmental and financial statistics disclosures, but not forecasts) that there was overall support for the hypothesis that the extent of financial disclosure is correlated with the development and efficiency of national equity markets. In general, U.K. disclosure is greater than that prevailing in the Continental EEC countries. Factors likely to explain disclosure differences between individual countries were also identified with special reference to company management and organization structure and the regulatory environment of legal, professional, and stock exchange rules.

These studies were followed by the survey of Lafferty, Cairns, and Carty[47] including a wide range of financial reporting practices by a total of 100 major European industrial companies from twelve countries. Scores were given to companies according to the disclosures made, ranking the extent of disclosure for each company and country relative to others rather than comparisons between groups of companies on the basis of particular types of disclosure practices. No basis for the scoring was given, however, other than that it was apparently derived using the International Accounting Standards Committee and other international standard-setting bodies as yardsticks. By the criteria applied, the United Kingdom was ranked first.

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[44] R. H. Parker, "Explaining National Differences in Consolidated Accounts," *Accounting and Business Research* (Summer 1977): 203-7.

[45] M. W. Pendlebury, *An International Comparison of Group Accounting*, Research Committee Occasional Paper No. 16 (London: Institute of Chartered Accountants in England and Wales, 1978).

[46] S. J. Gray, "Segment Reporting and the EEC Multinationals," *Journal of Accounting Research* (Autumn 1978): 242-53; idem, "Managerial Forecasts and European Multinational Company Reporting," *Journal of International Business Studies* (Fall 1978): 21-32; idem, "Statistical Information and Extensions in European Financial Disclosure," *International Journal of Accounting* (Spring 1978): 27-40.

[47] Michael Lafferty, David Cairns, and J. Carty, *Survey of 100 Major European Companies Reports and Accounts* (London: *Financial Times* Business Publishing Ltd., 1979).

A subsequent similar, but wider, international survey by Lafferty and Cairns covered a total of 200 major industrial companies from twenty countries, including the United States, Japan, Australia, South Africa, Brazil, Singapore and Malaysia, and Hong Kong.[48] The main purpose of this study was to use the scores and ranking to derive normative implications for reporting by multinational companies. The study concluded that a minimum list of disclosures should be accepted with special emphasis on consolidated and segmental data. The survey findings revealed that reporting in the United States, the Netherlands, Sweden, the United Kingdom, and Canada was the most complete, with that of Japan, Brazil, Belgium, Italy, and Spain the least adequate.

Measurement practices were considered by Forrester in a comparative review of different types of accounting for reserves with special reference to France, Germany, and the United Kingdom.[49] The analysis included a consideration of physical reserves, provisions and reserves, share premiums, capital redemption reserves, legal reserves, revaluation reserves, tax reserves, contra-cyclical reserves, and revenue reserves.

Gray also considered questions of measurement with particular reference to whether or not the measurement of accounting profits is correlated with national characteristics.[50] This topic was investigated by a comparative empirical study of profits reported by seventy-two large companies in France, West Germany, and the United Kingdom, and of adjustments to such published results for the period 1972-75 by European security analysts. Using the security analysts' results as a yardstick, the study concluded that country factors were significant in determining the amount of profits disclosed with special reference to regulatory and capital market differences. In effect, French and German practices were significantly more conservative than U.K. practice, the main reason being the relatively greater concern with banker and creditor interests compared to those of equity investors.

A final issue in compartive accounting is that of auditing. While Lee provided some information on the EEC countries,[51] Stamp (with Moonitz) reported in a more recent survey of auditing standards which

[48] Michael Lafferty and David Cairns, *Financial Times World Survey of Annual Reports* 1980 (London: Financial Times Business Information Ltd., 1980).

[49] David A. R. Forrester, *Reserve Building and Reserve Accounting,* Issues in Accountability No. 2 (Glasgow: Strathclyde Convergencies, November 1978).

[50] S. J. Gray, "The Impact of International Accounting Differences from a Security Analysis Perspective: Some European Evidence," *Journal of Accounting Research* (Spring 1980): 64-76.

[51] Lee, "Accounting in the EEC," pp. 61-97.

included the United States, Canada, Australia, Japan, Brazil, France, West Germany, the Netherlands, and the United Kingdom.[52]

An extension of research in the compartive mode is that which attempts to identify patterns of accounting development. Some of the work already mentioned provides a contribution in this respect. Not only has there been an enhanced awareness of the influence on accounting of country differences in terms of history, culture, and economic development, but also there has been a growing realization that fundamental differences exist between accounting in the United Kingdom and United States compared to that in Continental Europe, to the extent that distinct patterns or groupings may be identified and explained by reference to environmental variables.

Parker describes and analyzes country differences in this way.[53] Gray attempts more quantitative assessments of differences in disclosure and measurement practices.[54] There are a number of studies which have investigated the question of identifying patterns of accounting development. An early study by Johnson and Caygill explored the extent of U.K. influence in the development of accounting in the British Empire and Commonwealth countries.[55] The study concluded that no one pattern is dominant, but recent overseas developments have indicated a tendency for more government involvement than has been the U.K. experience.

The evolution of accounting in the developing countries was the subject of a later study by Briston.[56] He argued that the influence of U.K. and U.S. accounting was likely to be detrimental to the needs of countries, such as Nigeria, Tanzania, Indonesia, and Sri Lanka, because it was geared to the external financial reporting needs of the private sector instead of the more important modern concern with national economic planning and control.

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[52] Edward Stamp and Maurice Moonitz, *International Auditing Standards* (Englewood Cliffs, N.J.: Prentice-Hall, 1978).

[53] R. H. Parker, "Principles and Practice in Translating Foreign Currencies: An Essay in Comparative Accounting," *Abacus* (December 1970): 144-53; idem, "Some International Aspects of Accounting," *Journal of Business Finance* (Winter 1971): 29-39; idem, "British Accounting and the EEC"; idem, "Concepts of Consolidation in the EEC," pp. 72-75; and idem, "Explaining National Differences in Consolidated Accounts," pp. 203-7.

[54] Gray, "Segment Reporting," pp. 242-53; idem, "Managerial Forecasts," pp. 21-32; idem, "Statistical Information," pp. 27-40; and idem, "Impact of International Accounting," pp. 64-76.

[55] T. J. Johnson and M. Caygill, "The Development of Accountancy Links in the Commonwealth," *Accounting and Business Research* (Spring 1971): 155-73.

[56] R. J. Briston, "The Evolution of Accounting in Developing Countries," *International Journal of Accounting* (Fall 1978): 105-20.

Gambling studied accounting patterns to show that accounting was an integral part of the culture in which it was used.[57] For example, accounting in the United Kingdom and the United States was described as a product of capitalism which represented a system of cultural values quite distinct from those of developing countries.

Nobes and Matatko briefly reviewed the patterns of the classification of accounting systems and prepared an empirical study of accounting practices in forty-six countries using data from the Price Waterhouse surveys of 1973 and 1976.[58] They used factor analysis in an attempt to identify clusters of countries according to their accounting practices. While a U.K. grouping could be clearly identified, further groupings, such as for the United States and Europe, that would be expected on a priori grounds were difficult to identify. Nobes indicated the limitations of this research approach with special reference to U.S. work using data from the Price Waterhouse surveys.[59] Nobes and Parker reviewed the patterns including a proposal to classify financial reporting practices on a hierarchical basis.[60] On this basis, countries belong to a species, family, subclass, and class, with a basic division between a microbased class and a macro-uniform class of countries.

### International Accounting Harmonization

The area of international accounting harmonization is defined to include the development of accounting harmonization in the EEC, the setting of international or regional accounting and auditing standards, regulations, or guidelines by professional and/or governmental organizations, and issues relating to the accountability and control of multinational enterprises.

An early contribution by Parker identified EEC harmonization as an important reason to study international accounting with special reference to proposals for U.K. entry and the fact that such a course of action would entail moving closer to Continental European forms of accounting.[61] Parker also reviewed the proposed EEC Fourth Directive

[57] Trevor E. Gambling, "Toward a General Theory of Accounting," *International Journal of Accounting* (Fall 1971): 1-13; idem, *Societal Accounting* (London: Allen and Unwin, 1974); idem, *Beyond the Conventions of Accounting* (London: Macmillan, 1978).
[58] C. J. Nobes and J. Matatko, "Classification of National Systems of Financial Accounting," *AUTA Review* (Autumn 1980): 57-78.
[59] C. W. Nobes, "An Empirical Analysis of International Accounting Principles: A Comment," *Journal of Accounting Research* (Spring 1981): 268-70.
[60] Nobes and Parker, *International Accounting*.
[61] Parker, "Some International Aspects of Accounting."

on harmonization, concluding its impact could be substantial if adopted.[62]

Gray provided a more detailed analysis of the Fourth Directive proposal and concluded that it was too flexible to promote adequate comparability and that the proposal was deficient additionally in terms of ensuring the provision of information more relevant to investors.[63] Gray (with Wells) subsequently highlighted the problem of measurement of corporate liquidity.[64]

Morris outlined factors influencing financial reporting in the EEC with special reference to the more direct access to information enjoyed by investors and employees in the Continental European countries compared to those in the United Kingdom.[65] He argued that because the Fourth Directive was largely based on German practice, with its emphasis on published accounts being used for tax purposes, it was largely irrelevant to the information needs of investors in countries with developed stock markets, such as the United Kingdom. Burnett reviewed the proposed EEC Fourth Directive with special reference to changes between the first and second drafts of the proposal and noted the change of philosophy to incorporate the U.K. concept of a "true and fair view."[66]

Chastney explored the history of the true and fair view concept and its proposed implication in the EEC context with the conclusion that this should not be regarded as necessarily extending the influence of U.K. accounting.[67] There was no consensus as to the meaning of the concept, even in the United Kingdom. The prospect of a consensus in the EEC as a whole could not, therefore, be assured. Nobes provided a more current view of accounting harmonization in the EEC with a summary of the causes of differences between countries, a discussion

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[62] R. H. Parker, "Harmonization of Company Financial Reporting" in *Business and Accounting in Europe* (London: Saxon House, 1973), pp. 111-20.

[63] S. J. Gray, *Corporate Reporting and Investor Decisions in the EEC: The Comparability Problem*, Occasional Paper No. 3, International Centre for Research in Accounting (London: University of Lancaster, 1976).

[64] S. J. Gray and Murray C. Wells, "Corporate Liquidity and the Disclosure of Financial Position: A Comment on European Developments and a Counter Proposal," *Journal UEC-European Journal of Accountancy* (July 1977): 154-58.

[65] R. C. Morris, *Corporate Reporting Standards and the 4th Directive*, Research Committee Occasional Paper No. 2 (London: Institute of Chartered Accountants in England and Wales, 1974).

[66] R. Andrew Burnett, "The Harmonization of Accounting Principles in the Member Countries of the European Economic Community," *International Journal of Accounting* (Fall 1975): 23-30.

[67] J. G. Chastney, *True and Fair View — History, Meaning and the Impact of the Fourth Directive*, Research Committee Occasional Paper No. 6 (London: Institute of Chartered Accountants in England and Wales, 1975).

of the purposes of harmonization, an outline of current and proposed directives relevant to accounting, and an examination of U.K. implementation proposals for the Fourth Directive (approved in 1978).[68]

In addition to interest and concern with EEC harmonization, several writers have discussed broader issues concerning international accounting and auditing standards. Stamp discussed efforts to develop international accounting standards. While opposed to uniformity, he argued that there was a need for a theoretical structure which was coherent and logical.[69]

Benson provided a report, largely from his personal experience, of the historical background of the formation of the International Accounting Standards Committee (IASC) in 1973.[70] He argued that while the impact of the IASC would not be revolutionary or immediate, it would nevertheless be important. McMonnies conducted a wider review of the development of international professional and intergovernmental organizations involved in setting accounting standards, concluding that confusion and conflict rather than harmoniaztion could be the outcome.[71] He pleaded for research to help develop a general theoretical framework for the guidance of accounting internationally.

More recently, Stamp provided a survey of developments in international standard setting with an argument strongly supporting international accounting standards as a cooperative exercise between the profession and government.[72]

Stamp argued that there should be a demarcation of responsibilities and that the profession should determine measurement standards with the government providing the legal enforcement of such standards and a minimum framework of disclosure.[73] He suggested that the IASC should begin work on an international set of definitions of income and value as a first step in developing an international conceptual frame-

[68] C. W. Nobes, "Harmonization of Accounting within the European Communities: The Fourth Directive on Company Law," *International Journal of Accounting* (Spring 1980): 1-16.

[69] Edward Stamp, "Uniformity in International Accounting Standards," *Journal of Accountancy* (April 1972): 64-67.

[70] H. Benson, "The Story of International Accounting Standards," *Accountancy* (July 1976): 34-39.

[71] P. N. McMonnies, "EEC, UEC, AST, IASC, IASG, AISG, ICCAP-IFAC, Old Uncle Tom Cobbleigh and All," *Accounting and Business Research* (Summer 1977): 162-67.

[72] Edward Stamp, "International Standards to Serve the Public Interest," in *Internationalization of the Accountancy Profession,* ed. W. John Brennan (Canadian Institute of Chartered Accountants, 1979), pp. 117-25.

[73] Edward Stamp, *The Future of Accounting and Auditing Standards,* Occasional Paper No. 18, International Centre for Research in Accounting (Lancaster: University of Lancaster, 1979).

work. Furthermore, the International Accounting Standards Committee (IASC) and the International Federation of Accountants (IFAC) should also cooperate with the United Nations and agree to jurisdiction over measurement and disclosure issues. Moreover, the IASC should require national professional bodies to report on the degree of compliance with international standards in an effort to improve the rate of adoption.

McComb, who examined the objectives underlying pressures for international harmonization,[74] took a contrasting view. While accepting the case for further development of international accounting standards, he argued that more attention should be given to understanding the reasons for the continuing existence of national differences, and thus the problems of attempts to impose uniform standards internationally.

Stamp (with Moonitz) explored the issue of international auditing standards.[75] They developed arguments in support of standards and proposed a set of international auditing standards. An evaluation of the situation in major auditing countries indicated that nine countries could be identified as vital to the success of a proposed International Auditing Standards Committee: the United States, the United Kingdom, Australia, Canada, the Netherlands, France, West Germany, Japan, and Brazil. The feasibility of international auditing standards was affirmed, despite the existence of obstacles, such as language, nationalism, and enforcement.

The question whether there should be accounting standards for multinational enterprises has been of interest to researchers. Gray, Shaw, and McSweeney examined controversial issues surrounding the development of accounting standards for multinational enterprises.[76] They concluded that multinational enterprises are a primary focus for international standards; the standard-setting process, as it affects them, is a social choice process that inevitably involves supranational inter-governmental, as well as international, professional organizations. Gold identified problems of multinational enterprises, including the increasing diversity of standards internationally, the 'information overload' problem, and doubts concerning the cost/benefit effectiveness of much of

[74] Desmond McComb, "The International Harmonization of Accounting: A Cultural Dimension," *International Journal of Accounting* (Spring 1979): 1-16.
[75] Stamp and Moonitz, *International Auditing Standards*.
[76] S. J. Gray, J. C. Shaw, and L. B. McSweeney, "Accounting Standards and Multinational Corporations," *Journal of International Business Studies* (Spring/Summer 1981): 121-36.

the information demanded by users.[77] He concluded that the active participation of multinationals in standard setting can be expected to increase in view of their direct interest as preparers and users.

A final area of research concerns public sector accounting. Stone reviewed historical developments in the international harmonization of national income accounting, that is, aggregates of income, expenditure, savings, and investment.[78] He outlined the latest and most comprehensive international comparison project sponsored by the United Nations, with harmonized accounts expressed in a single international unit of value. Stone noted that the first essential for comparative purposes is a standard system based on a generally accepted set of definitions and classifications which can serve as a goal for individual country estimates. He also identified similarities and differences in problems relating to the harmonization of public and private accounts.

### International Financial Reporting Issues

The area of international financial reporting issues is defined to include a wide range of topics which relate to problems that are either unique to international business or have an international dimension.

The problem of accounting for price changes and inflation has already been referred to briefly in the context of comparative accounting and will now be considered as a financial reporting issue. Scapens provided a survey of inflation accounting developments in eighteen countries which contributed to the debate by identifying a number of different approaches to inflation accounting in practice.[79] These included the creation of reserves, the revaluation of assets, and the introduction of complete systems which accounted for changes in specific prices, changes in the general level of prices, or both types of changes.

Kirkman concluded from his more recent survey of developments worldwide that the rate of adoption of inflation accounting systems was strongly correlated with the rate of inflation. In South American countries where very high rates had been experienced, the preference was for general purchasing power systems which could be introduced quickly.[80] In the English-speaking countries, there was a general trend toward the acceptance of current cost accounting but with controversy surrounding the treatment of monetary items. The United States was

[77] Henry Gold, "Accounting Standards and Multinational Corporations" in *British Accounting Standards: The First Ten Years,* ed. Ronald Leach and Edward Stamp (Cambridge: Woodhead-Faulkner, 1981), pp. 135-48.
[78] Richard Stone, "The International Harmonization of National Income Accounts," *Accounting and Business Research* (Winter 1981): 67-79.
[79] Scapens, *Treatment of Inflation.*
[80] Kirkman, *Accounting under Inflationary Conditions.*

in some respects an exception, however, because of its requirements for firms to produce both general purchasing power and current cost accounting information. The early 1980s were predicted to be years of continuing experimentation.

Tweedie provided an analysis of professional proposals and governmental inquiries of the inflation accounting issue, with special reference to the United States, Canada, the United Kingdom, Australia, New Zealand, and South Africa. He concluded that there appeared to be agreement on an entity approach using current costs in the British Commonwealth countries but not North America.[81]

A more quantitative contribution to the debate was provided by Gray, with an investigation of the feasibility of the "exit price" system proposed by Chambers.[82] The system was applied in a case study of a U.K. multinational company with the conclusion that the system was both feasible and significantly different from the historical cost system.

The "replacement value" system, with special reference to the Netherlands, was the subjert of Ashton's recent study.[83] He reviewed major theoretical contributions to replacement value accounting, especially that of Limperg, together with factors influencing practice in the Netherlands. In addition, he conducted an empirical study, including a questionnaire survey, of twenty-five Dutch companies publishing some form of replacement cost information. Tests for the impact of the "replacement value" system on performance compared to historical cost revealed no significant differences in rankings. The results of the questionnaire survey showed that companies were using replacement cost data for the evaluation of divisional and group performance and the preparation of budgets. The accuracy of the data was open to question, however, because of the lack of reliable indices and the lack of attempts to account for technological change and changes in product-mix.

Foreign currency translation is a contentious issue unique to international business. Parker provided an early comparative review of related principles and practices. He concluded that the principles were confused and practice diverse.[84] He argued that the main reason for the confusion was the failure to consider the necessary relationship between price changes and exchange rate changes. He suggested that

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[81] Tweedie, *Financial Reporting.*

[82] S. J. Gray, "Accounting for Price Changes: A Case of a Multinational Company," *Journal of Business Finance and Accounting* (Spring 1976): 1-13.

[83] R. K. Ashton, *The Use and Extent of Replacement Value Accounting in the Netherlands* (London: Institute of Chartered Accountants in England and Wales, 1981).

[84] Parker, "Principles and Practice."

the historic rate approach to translation was probably developed as a rough and ready means of adjusting for both elements on the somewhat heroic assumption of purchasing power parity whereby relative changes in prices between countries would be matched by exchange rate changes. A more useful approach, he argued, would be to combine replacement costs with closing exchange rates.

In a review of foreign currency translation theory, Patz identified two basic normative approaches in the form of the entity or restatement approach and the proprietary or measurement approach. The latter emphasized the dependence of the foreign subsidiary on the parent company.[85] In respect to the former, he suggested that the translation could be identified as a metrics problem with the possible use of price parity indices as well as or instead of exchange rates. This analysis was continued by Patz with the development of a foundation for a price parity theory of translation which viewed translation as a metrics problem with foreign operations taken to be independent going concerns, and the objective of the firm the maximization of command over goods and services in the foreign context.[86] Patz further developed a price parity approach with an examination of issues relating to methodology and implementation.[87]

Tuckwell and Piper provided some empirical evidence of disclosures relating to foreign operations including translation in a survey of fifty major U.K. companies, with arguments for more detailed statements of accounting policy and disaggregated geographical data.[88] Piper suggested that the impact of exchange rate changes on interim reports should be disclosed.[89]

Walker prepared a critical analysis of translation approaches to the measurement of exposure to exchange risk from the perspective of using such information for the management of exchange risk.[90] He argued that the distinction between "accounting" and "economic" (that is,

[85] D. H. Patz, "The State of the Art in Translation Theory," *Journal of Business Finance and Accounting* (Autumn 1977): 311-25.

[86] D. H. Patz, "A Price Parity Theory of Translation," *Accounting and Business Research* (Winter 1977): 14-24.

[87] D. H. Patz, "Price Parity Translation: Methodology and Implementation," *Accounting and Business Research* (Summer 1981): 207-16.

[88] K. J. Tuckwell and A. G. Piper, *Disclosure of the Overseas Operation of United Kingdom Companies,* Research Committee Occasional Paper No. 11 (London: Institute of Chartered Accountants in England and Wales, 1977).

[89] Andrew G. Piper, "A Note on Translation for Interim Accounts," *International Journal of Accounting* (Fall 1979): 45-52.

[90] D. P. Walker, *An Economic Analysis of Foreign Exchange Risk,* Research Committee Occasional Paper No. 14 (London: Institute of Chartered Accountants in England and Wales, 1978).

net present value of future cash flows) exposure to exchange risk must be clearly understood by both company management and the financial community if adverse behavioral effects are to be avoided. A survey of fifteen major U.K. multinationals revealed that only two companies were concerned to manage their translation exposures on the grounds that the decisions of investors, bankers, and others would be influenced by translation gains and losses. This survey was conducted, however, against the background of a weak pound. In conclusion, the study suggested the ideal solution would be an accounting system in which accounting and economic exposures were identical, but in the meantime, translation gains and losses should be reported in a manner that would not become the focus of exchange risk management.

Earl and Paxson similarly advocated an economic value approach. They proposed a system of "value accounting" using forward rates to record transactions to create currency awareness in a more realistic manner.[91] More recently, Nobes[92] and Flower[93] have provided useful reviews of the debate on foreign currency translation. Nobes' critical review of the history and development of translation approaches in the United States and the United Kingdom attempted to clarify the differences between methods and the causes of such differences.[94] The problem of inflation accounting was also discussed with the conclusion that some form of current value accounting seemed less vulnerable than general purchasing power accounting in the context of the translation debate. Ideas to use purchasing power parities as an alternative to exchange rates were discussed. The study suggested that in practice, the translation method used in any country at any particular time is likely to be influenced more by its effect on profits than by theory. Flower analyzed foreign currency translation with special reference to recent developments and the two main contenders — the "temporal" and "closing" rate methods.[95] He also discussed the inflation accounting issue and noted that if foreign subsidiary accounts were expressed in terms of values at the balance sheet date, both translation methods would give identical results. Accounting approaches to translation were compared with economic perspectives including purchasing power parity and interest rate parity theory. He concluded that an important practical influence on the choice of methods were arguments of the "economic consequences" of each method.

[91] Michael Earl and Dean Paxson, "Value Accounting for Currency Translations," *Accounting and Business Research* (Spring 1978): 92-100.
[92] Nobes, "Translation Debate," pp. 421-31.
[93] Flower, "Foreign Currency Translation."
[94] Nobes, "Translation Debate," pp. 421-31.
[95] Flower, "Foreign Currency Translation."

Group accounting and consolidations are a familiar financial reporting issue. In the international context, this becomes an even more complex problem. Shaw examined one of the major areas of difficulty concerning criteria by which to identify groups and subsidiaries to be included in the consolidation process.[96] He reviewed IASC and EEC developments and concluded that there was some merit in moving toward a more managerial approach in contrast to the current U.K. emphasis on share ownership for the purposes of determining control of one company by another.

Parker, as indicated earlier in the comparative accounting context, provided a comparative analysis of consolidation concepts, that is, entity, parent company, and proprietary concepts in some of the EEC countries.[97] He noted that the parent company concept, where the parent company is treated as the dominant shareholder and the minority interest is credited with its share of the investee's net tangible assets but not with a share of goodwill on consolidation, was apparently being proposed at both the EEC and IASC level. Since practice in the EEC follows all concepts in varying degrees, Parker indicated that harmonization would not be easy. He provided an explanation of different approaches to consolidation.[98] He identified change agents, such as the international transfer of accountants, international accounting firms, international organizations of accountants (IASC and Union Européene des Expertes Comptables Economiques et Financiers — UEC), governmental agencies (the Commission des Operations de Bourse in France), multinational enterprises, and teachers and their textbooks. The rate of diffusion of a new accounting practice, such as consolidations, would, however, depend on characteristics including relative advantage, compatibility, complexity, applicability, observability, and freedom from regulation. Using this framework, he analyzed the development of consolidation accounting in the United States, the United Kingdom, Germany, France, and the Netherlands.

Regarding differences in national requirements and practices concerning group accounting, Pendlebury provided a detailed analysis of the situation in the United States, the United Kingdom, France and West Germany, including a survey of accounting practices by seventy-one companies.[99] The prospects for harmonization internationally were evaluated with the conclusion that there were grounds for optimism

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[96] J. S. Shaw, "Criteria for Consolidation," *Accounting and Business Research* (Winter 1976): 71-78.

[97] Parker, "Consolidation in the EEC," pp. 72-75.

[98] Parker, "National Differences," pp. 203-7.

[99] Pendlebury, "International Comparison."

to the extent to which practices in France have developed without formal harmonization requirements. It was argued that it was not essential for harmonization purposes for consolidated statements to have the same status as in the United States. Harmonization would be assisted if consolidated information were introduced as an addition to traditional forms of reporting.

A recent contribution is the overview of consolidation accounting provided by Nobes and Parker which gave special attention to the concept of a group, to requirements and practices in the United States, the United Kingdom, the Netherlands, France, and Germany and to harmonization at the EEC and IASC levels.[100] Included in the analysis was a brief survey of the extent to which eighteen companies, including three "international" companies, provided consolidated statements.

Segmental reporting, both by line of business and geographical area, is an issue of recent and rapidly increasing significance in the context of disclosure by multinational enterprises.

Emmanuel and Gray provided an analysis and evaluation of the newly introduced standard Financial Accounting Standards Board No. 14 in the United States in terms of its potential for application in other countries, especially the United Kingdom.[101] They argued that FASB No. 14 was not only complex and arbitrarily prescriptive but that its fundamental weakness was the scope for managerial discretion in the identification of segments.

Emmanuel and Gray also investigated the extent and quality of segmental disclosures by U.K. companies in an empirical study of the 100 largest industrial companies.[102] The study revealed that the majority of companies provided segmental information, both as to line of business and geographical area, that was not consistent with supplementary disclosures regarding the company's organization gathered from the chairman's review or directors' report. Moreover, the majority of companies provided geographical disclosures on a Continental basis which was so broad as to obscure the significance of geographical diversification. The problem of segment identification was established as an important issue in the United Kingdom as well as in the United States.

In a subsequent article, the author proposed a means to overcome

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[100] Nobes and Parker, "International Accounting."

[101] C. R. Emmanuel and S. J. Gray, "Corporate Diversification and Segmental Disclosure Requirements in the USA," *Journal of Business Finance and Accounting* (Winter 1977): 407-18.

[102] C. R. Emmanuel and S. J. Gray, "Segmental Disclosures and the Segment Identification Problem," *Accounting and Business Research* (Winter 1977):37-50.

some of these problems.[103] They argued that the significance of segments for reporting purposes could be more effectively assessed by using a qualitative, rather than quantitative, approach with a company's organization structure as the starting point. Reportable segments would be those segments separately identified in the organization structure subject to an appropriate level of disaggregation indicated by the application of a standard industrial classification. This would standardize the disclosures made, enhance their potential for verification, and provide an insight into management strategy.

Gray prepared an empirical study of segment reporting by the 100 largest industrial multinational companies based in the EEC countries.[104] The study showed that disclosure by U.K. companies was greater than that by Continental EEC companies (including geographical analyses of sales and profits but not in respect of production analyses). Factors explaining this situation include differences in company management and organization structure and the regulatory environment of legal, professional, and stock exchange requirements. He argued that the critical problem with existing disclosure requirements in the EEC was the lack of appropriate criteria for the identification of reportable segments.

Gray recently surveyed segment reporting theory and evidence concerning the advantages and disadvantages of disclosure, together with a discussion of problems relating to identification, materiability, content, measurement, presentation, and audit.[105]

A final financial reporting issue to be considered is the disclosure of forecast information. This includes statements of business prospects, research and development, and capital expenditure. Gray investigated this issue in an empirical study of the reporting practices of the 100 largest industrial multinational companies based in the EEC.[106] While the provision of qualitative information of a general nature regarding prospects was supported by EEC multinationals and confirmed by the evidence of disclosure practices, there was opposition to the disclosure of quantitative profit forecasts. The study concluded that the interpretability of much of the qualitative information could be improved and more information should be disclosed concerning research and

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[103] C. R. Emmanuel and S. J. Gray, "Segmental Disclosures by Multibusiness Multinational Companies: A Proposal," *Accounting and Business Research* (Summer 1978): 169-77.

[104] Gray, "Segment Reporting," pp. 242-53.

[105] S. J. Gray, "The Impact of International Accounting Differences from a Security Analysis Perspective: Some European Evidence," *Journal of Accounting Research* (Spring 1980): 64-76.

[106] Gray, "Managerial Forecasts," pp. 21-32.

development activity, including costs, and capital expenditure and financing plans.

#### International Managerial Decision Making and Financial Control

The area of international decision making and financial control is defined to include issues, such as foreign investment decisions, capital budgeting and long-term financing, foreign exchange exposure measurement and risk management, transfer pricing, taxation and performance evaluation, and control systems.

Foreign investment strategy, decision making, organization, and control were the subject of a comprehensive and classic study by Brooke involving extensive interviews with senior managers from over eighty multinational companies.[107] The special problems and significance of planning and control for multinational operations were examined.

Problems of international portfolio investment were also studied. An empirical study by Saunders and Woodward examined whether or not the coexistence of flexible exchange rates and the investment currency premium in the United Kingdom had significantly reduced the gains from international portfolio diversification during the period 1971 to 1975. The study concluded that significant gains existed which were increased when the investment currency premium was considered.[108] A single portfolio including only Japanese securities dominated all others, contrary to expectations, although this may be explained by the time period of the study.

Readman,[109] Coats and Wooley,[110] and Samuels, Groves, and Goddard[111] all surveyed international sources of finance with special emphasis on Europe. Differences between countries in terms of financial structure, philosophy, institutions, and corporate gearing were identified and evaluated.

Kettell[112] and McRae and Walker[113] reviewed the management of

[107] Michael Z. Brooke and H. Lee Remmers, *The Strategy of Multinational Enterprise,* 2 ed. (New York: Pitman, 1978), ch. 4, 8.

[108] Anthony Saunders and Richard S. Woodward, "Gains from International Portfolio Diversification: UK Evidence 1971-75," *Journal of Business Finance in Europe* (Autumn 1977): 299-309.

[109] Peter Readman, *The European Money Puzzle* (Michael Joseph, 1973).

[110] J. P. Coates and P. K. Wooley, "Corporate Gearing in the EEC," *Journal of Business Finance and Accounting* (Spring 1975): 1-18.

[111] J. M. Samuels, R. E. V. Groves, and C. S. Goddard, *Company Finance in Europe* (London: Institute of Chartered Accountants in England and Wales, 1975).

[112] Brian Kettell, *The Finance of International Business* (Graham and Trotman, 1979).

[113] T. W. McRae and D. P. Walker, *Foreign Exchange Management* (Englewood Cliffs, N.J.: Prentice-Hall, 1980).

foreign exchange risk together with internal and external techniques of management.

Transfer pricing is a contentious issue which poses a number of difficult problems both in internal and external reporting. Stewart reviewed these issues in the context of multinational enterprises.[114] He argued that the financial behavior of multinationals is heterogeneous and complex but that the fiscal system of the host country and the industrial sector within which the company operates are the most important influences on financial strategy and the use of transfer prices.

Performance evaluation and control systems are controversial in the managerial decision-making context. Scapens and Sale recently conducted a comparative empirical study of divisionalized companies in the United States and the United Kingdom to identify methods of controlling capital investment in practice and the relationship of the use of performance measures.[115] A questionnaire survey of 205 U.S. and 211 U.K. divisionalized companies was conducted, concluding that divisional managers may be able to influence their capital investment decisions in spite of formal authorization procedures and that postcompletion audits are widely used in the United States compared to only minor use in the United Kingdom.

Taxation is the final managerial issue of interest to researchers included. The problems of taxation of multinational enterprises was the subject of books by Chown[116] and Adams and Whalley.[117] They included topics, such as international double taxation, governmental taxation policy, Organization for Economic Cooperation and Development and EEC proposals, and the transfer pricing issue. Morgan and Robinson provided a more specific focus with a study of oil taxation with special reference to the United Kingdom and Norwegian systems.[118]

Nobes reviewed and compared the systems of corporation tax prevailing in the United Kingdom, France, Ireland, and West Germany.[119]

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[114] J. C. Steward, "Multinational Companies and Transfer Pricing," *Journal of Business Finance and Accounting* (Autumn 1977): 353-71.

[115] Robert W. Scapens and J. Timothy Sale, "Performance Measurement and Formal Capital Expenditure Controls in Divisionalized Companies," *Journal of Business Finance and Accounting* (Autumn 1981): 389-419.

[116] J. R. Chown, *Taxation and Multinational Enterprise* (Longman, 1974).

[117] J. D. R. Adams and J. Whalley, *The International Taxation of Multinational Enterprises* (Associated Business Programs, 1977).

[118] J. R. Morgan and C. Robinson, "Comparative Effects of the UK and Norwegian Oil Taxation Systems on Profitability and Government Revenue," *Accounting and Business Research* (Winter 1976): 2-16.

[119] C. W. Nobes, "Imputation Systems of Corporation Tax in the EEC," *Accounting and Business Research* (Spring 1980).

Some comparisons were also drawn with the United States. Proposals for EEC harmonization were discussed with the conclusion that despite the general move to the imputation system, there were still major differences in the methods of determining taxable income. Nobes and Parker provided a more wide-ranging comparative review of tax bases and systems in the United States, the Netherlands, France, Germany, and the United Kingdom, and a discussion of problems of international harmonization.[120]

## RETROSPECT AND PROSPECT

In retrospect, U.K. research in the field of international accounting has been conducted primarily in the comparative international accounting context. At the same time, significant interest has been evident concerning the problem of international accounting harmonization and a number of international financial reporting issues. On the other hand, the area of international managerial decision making and financial control has been relatively neglected.

Much of this research can be classified as a priori. For the area of international accounting harmonization, a growing amount of recent empirical work concerns systematic rather than piecemeal observation.

What is the position in each of the areas of study identified and what is the prospect for future research?

Consider first the area of comparative international accounting. In retrospect, the scope of most of this work has been restricted to the United States, the Soviet Union, and Continental European countries, particularly France, Germany, and the Netherlands. Surprisingly, there has been very little study of accounting in British Commonwealth countries, either developed or developing. Clearly, there is considerable opportunity for further work to include South American countries and Far Eastern countries. The main focus of research has been on company financial reporting with scant reference to public sector accounting.

There have also been relatively few studies which provide a comparative analysis of accounting between countries rather than a description and analysis of accounting in the context of a particular country or on a country-by-country basis. A major difficulty with this type of work is the necessity to develop a comparative framework by which similarities and differences may be evaluated and explanatory variables identified and generalizations developed. This is essential, however, if the classification of systems is to be attempted. Further

[120] Nobes and Parker, *International Accounting.*

work in the area of classification seems to be vital to the maturity of research on the comparative aspects of the subject. This should result in improved explanations and predictions concerning the development of accounting systems, the influential factors involved, and the potential for international harmonization.

Progress in this respect, however, will be limited without a substantial effort to gather data relating to accounting practices and environmental factors which is more comprehensive and reliable than is currently available. Much of the work in the comparative area to date has relied too much on secondary sources or has been piecemeal rather than systematic in terms of empirical observations. A limitation of the few systematic studies that have been prepared is that they have been based on relatively small sample sizes and that they are for the most part cross-sectional in orientation with not enough attention to the dynamic aspects of change over time.

Research in international accounting harmonization has been primarily concerned with EEC harmonization (a subject of regional significance), but there is some recent interest in wider international issues, including the accounting and disclosure standards for multinational enterprises.

The focus has been on company financial reporting standards with relatively little attention being paid to the question of company auditing or to public sector accounting. Clearly, there is much opportunity for further work on a number of problems in the context of the rapid development of multinational enterprises, international accounting firms, and international intergovernmental and professional organizations concerned with the regulation of accounting and auditing at the international level.

There is very much an a priori emphasis to work in this area, as might be expected, with the apparent wide acceptance of the goal of accounting harmonization. There has been a total neglect of empirical work, but it has generally been piecemeal and centered on the issues indirectly by way of demonstrating obstacles to, or the potential for, harmonization rather than attempting to evaluate the costs and benefits of harmonization per se. Now that the IASC and EEC programs are well under way, there seems to be opportunity for impact studies. The link between research of this nature and that on the classification of accounting systems also seems worthy of further exploration and development.

International financial reporting issues have provided researchers with another major area of study. In retrospect, the amount of work

completed so far has focused on four important topics: accounting for price changes and inflation, foreign currency translation, group accounting and consolidations, and segment reporting. Relatively little work has been done on some issues, such as forecasts and social reporting. This situation is rapidly changing with the recent interest in the subject at the national level and in the context of disclosure by multinationals.

Despite the uniquely international issue of foreign currency translation, no more attention has been devoted to this subject than to any other. The emphasis was on a priori analysis. Much of the work on this and other financial reporting issues, such as inflation accounting, also has a large comparative international element in contrast to the potential to treat this from the perspective of problems facing the multinational enterprise.

All of the issues so far identified deserve the further attention of researchers. Segment reporting, being at the interface of managerial and financial accounting, has considerable scope for further work, notable in respect to geographical segmentation.

Research in the area of international managerial decision making and financial control is, by way of contrast, relatively sparse with a limited coverage of issues. Problems, such as capital budgeting, foreign exchange risk management and performance evaluation and control systems, have only recently become subjects of interest to any significant degree. Very little empirical research has been conducted despite the potential for field work with U.K. multinationals. This situation is now changing.

In conclusion, the history of U.K. research in the field of international accounting has been one of gradual development with increasing momentum from about the mid-1970s. While the emphasis of the work completed to date has been on comparative international aspects of the subject, the prospect now is not only one of further development from this established base, but it may also be expected that there will be an exploration of some new areas, as well as those which are more familiar with special reference to international managerial decision making.

**SELECTED REFERENCES**

Nicholas Dopuch and Lawrence Revsine. *Accounting Research 1960-70: A Critical Evaluation*. Urbana: University of Illinois, 1973.

A. T. McLean, ed. *Business and Accounting in Europe*. London: Saxon House, 1973.

Robert R. Sterling, ed. *Research Methodology in Accounting*. Houston: Scholars Book Company, 1972.

# *Some Conceptualizing on the True and Fair View*

BORIS POPOFF*

In New Zealand and other countries with company legislation based on precedents from the United Kingdom, the published statements of companies are required to give a "true and fair view" of operating results and state of affairs. The need to give a true and fair view is recognized by the accounting profession. For example, the explanatory foreword to the statements of standard accounting practice issued by the New Zealand Society of Accountants states: "Adherence to the concept of a true and fair view is an essential requirement of financial reporting standards in New Zealand" (par. 1.2).

Although company legislation indicates providing a true and fair view as the overriding consideration in financial reporting, it does not define what the terms "truth" and "fairness" mean in the financial reporting context, nor does it prescribe (apart from specifying certain minimum requirements regarding disclosure) the means by which truth and fairness should be attained.

The overriding importance attached to the concept and standard of the true and fair view in financial reporting and in the associated measurement of revenue, expense, and income, and of assets, liabilities, and proprietorship contrasts oddly with the lack of definition and understanding of what constitutes truth in the accounting context and fairness in financial reporting. The attempts of accountants to apply the concept in particular cases may contribute to its definition and enlarge our understanding of its significance. An unwillingness to be bound to a specific interpretation of its meaning may equally reflect

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the nature of the concept itself — that some of its value lies in its lack of definition, so that it must be reinterpreted to serve its function in a changing environment. More cynically, the avoidance of definition may reflect the desire to avoid uncomfortable changes from the status quo, from the generally accepted, from the availability of choices among alternatives. Whatever one's interpretation, there is a case for constant reexamination which may lead to a better understanding of the nature of accounting truth as a precondition for its fair reporting in financial statements.

## SOME PROBLEMS OF INTERPRETATION

The true and fair requirement may be interpreted in terms of the general principles applied in the interpretation of statutes. Two of these principles are that the words of a statute must be given their ordinary or popular meaning unless there is something to the contrary in the context or plan of the statute, and that "technical words of known legal import" must be given their technical meaning.[1] Since "true" and "fair" are not technical words and have no "known legal import" in relation to financial reporting, it follows reasonably that they should be given their ordinary, popular meaning. In other words, "true" and "fair" should mean what people expect them to mean.

Dictionary definitions of "true" include "in accordance with fact and reality" and the negative "not false or erroneous," while "fair" is defined as "just," "equitable," "unbiased." Truth and fairness in line with these popular definitions would seem to be highly desirable qualities of financial statements, qualities that users would feel entitled to expect with the auditor's opinion serving as an assurance that the users' reasonable expectations are justified.

Following the dictionary definitions of "truth" and "fairness," one may conclude that the true and fair view requirement should be taken to mean the obvious:

> If it is agreed that the words "true" and "fair" mean what they say, then it is suggested that the Act calls for a clear statement of the *actual* trading results of the period under consideration and the *actual* financial position at year end.[2] (Emphasis added.)

As related to accounting, however, the concept of truth as being "in accordance with fact and reality" and as being "not false or erroneous" is difficult to apply. While there may be little disagreement of

[1] T. R. Johnston, G. C. Edgar, and P. L. Hays, *The Law and Practice of Company Accounting in New Zealand* (Wellington: Butterworths, 1978), p. 14.
[2] W. G. Rodger and W. Scott Gilkinson, *Auditing* (Sweet and Maxwell, 1962), p. 296.

the need for truth in accounting, people who speak of truth in accounting may have different "facts" in mind. For example, some people have argued that the "facts" in accounting are objectively determined historical costs while others have argued that the relevant "facts" for attaining truth in accounting are current values represented by current market prices. Further, the "facts" in accounting are determined by generally accepted accounting principles such as those relating to the recognition of revenues and losses, the measurement and allocation of costs, valuation of assets, tax allocation, and the treatment of research and development costs. The availability of alternatives to deal with specific accounting problems requires a choice of accounting methods and procedures which in turn requires the use of judgment; one result is that the choice may be influenced by expediency and bias.

Similar problems arise when we attempt to relate the concept of fairness to accounting. Fairness as "impartiality," "justice," "freedom from bias" must inevitably relate to accounting truth. While truth in accounting has usually been associated with the contents of financial statements, fairness has been largely associated with the mode of presentation. Again, the mode of presentation requires the exercise of judgment in the choice of format and manner of disclosure beyond the legal minimum requirements, in the highlighting of significant items, in the provision of graphs, summaries, and trend statements. As a result, the "truth" and "fairness" of financial statements are very much the product of opinion and judgment.

## THE NATURE OF ACCOUNTING TRUTH

The mathematical neatness of the double entry system of recording and processing accounting data, and the equality of debits and credits which results in a balance sheet that actually balances imply precision in accounting reports which they do not necessarily possess.

The precision of the double entry system is only a technical precision: its importance is not to be underrated. The double entry system is the most efficient system available for the recording and analysis of business transactions. As is the case with any processing system, however, the quality of the output depends very largely on the quality of the input. Some inputs into the accounting processing system are transactions based on "facts"; others are very much the product of judgment and compromise. Further, some facts, such as historical costs, may have ceased to be relevant.

Two important matters must be remembered when considering the "facts" underlying accounting measurement and reporting: (1) the

lack of agreement among accountants regarding the meaning of "profit" and "financial position"; and (2) the uncertainty which attaches to financial operations and, therefore, to accounting measurement and reporting.

The lack of agreement among accountants on the meaning of profit and financial position complicates the determination and reporting of "facts" in accounting. This is not to say that there are no facts relating to the subject matter of accounting. Were this so, any arbitrary selection from among arbitrarily determined accounting principles would have satisfied the criteria of truth and fairness. The problems in financial reporting arise from the lack of a clear agreement on the objectives of financial statements in the face of diversity of user interests, from the absence of a frame of reference for the evaluation of existing and the development of new accounting methods and procedures, from the complexity of the subject matter of financial accounting in a changing economic, social, and political environment, from the necessity to use judgment in accounting measurement, and from the uncertainty of final outcomes in the assessment and carrying forward of business assets and liabilities.

## A "USER" APPROACH TO ACCOUNTING OBJECTIVES

A "popular" interpretation of the true and fair view is sometimes reflected in what may be called a "user" approach in deciding what information to disclose in financial statements and the manner of disclosure. The reasoning behind such "user" approach may be expressed as follows:

1. Accounting is utilitarian in nature; the justification for its existence lies in its ability to meet user needs.
2. What is needed in the formulation of accounting principles is to determine user needs and to define accounting objectives on the basis of those needs.
3. The objectives so defined would then be used to evaluate existing and proposed accounting procedures.
4. To the extent that financial statements meet the stated accounting objectives, they can be deemed to give a true and fair view.

The author suggests that this approach to the definition of accounting objectives places too much emphasis on what is desirable and does not give adequate attention to the constraint of what is feasible, given the subject matter of accounting and the problems associated with accounting measurement and reporting.

An example of a user approach to defining accounting objectives is provided by the Trueblood report on the objectives of financial statements. The report is significant in that, in its definition of the basic objective of financial statements, it recognized the economic nature of the decisions made by users and the need for financial statements to provide information which is useful in making of such decisions.[3] The report concluded:

In making decisions, users should be able not only to understand the information presented, but to assess differences in its reliability, to rely on its fairness, to compare it with information about alternative opportunities, and to assess its consistency with previous presentations.[4]

There can be no question that the attainment of these *quality* objectives regarding the information to be disclosed in financial statements is desirable. The real problem is to agree on the nature of the information to be disclosed and on the context in which the understandability, fairness, and consistency/comparability of financial statements should be conceived, given our present level of understanding of the phenomena which are the subject of accounting measurement and reporting, the diversity of user interests in financial statements, and the different levels of technical expertise possessed by these users.

## THE UNCERTAINTY FACTOR

The uncertainty which attaches to business operations necessitates the expression of opinion and the exercise of judgment in the evaluation of the operating results and state of affairs of business enterprises. Many students are taken aback when first confronted with the claim that profit, as measured by traditional accounting methods, is a statement of opinion based on expectations of the future, yet the claim is very much correct. The use of a cost basis in asset measurement is justified on the continuity assumption; depreciation charges, even when based on historical cost, are determined on the basis of the expected useful life of assets, any expected salvage value, and an assumed pattern of depreciation cost incurrence; the valuation of inventories at historical cost is based on the expectation that they will realize an amount greater than historical cost in the next accounting period. Uncertainty is inherent in business operations; it cannot be avoided in accounting measurement and should be given adequate recognition in the interpretation of accounting reports. Since accounting measurement is based on expecta-

[3] *Report of the Study Group on the Objectives of Financial Statements* (New York: American Institute of Certified Public Accountants, 1973), p. 13.
[4] Ibid., p. 66.

tions, judgment is an integral part of accounting measurement. Truth and fairness in financial reporting, therefore, must ultimately relate to the soundness of judgment.

### THE COMPLEXITY OF ISSUES

Terms such as "true and fair," "operating results," and "financial position" have a deceptive ring of simplicity which may obscure the complex issues associated with the measurement and reporting of the income and state of affairs of business firms. The resolution of these issues requires a fundamental study of the phenomena which underlie the operations of business enterprises in order to form a basis for the formulation and evaluation of accounting principles, methods, and procedures. Let us examine the accounting principle of consistency as an example.

That the existence of alternative accounting methods and procedures creates problems in the interpretation of financial information has long been recognized. The application of different methods and procedures affects the comparability of financial statements from one period to another and from one firm to another. To overcome the problem, the principle of consistency has received support and has become part of current accounting practice. The principle of consistency is based on simple logic — if one wants financial statements to be comparable, they should be prepared on the basis of a set of accounting methods and procedures consistently applied from one period to another. This, however, is an oversimplification of the problem of attaining comparability in financial statements. For example, the consistent application of historical cost in the preparation of financial statements over time will not produce comparable financial statements if significant price changes have occurred. This means that the solution of the problem of comparability of financial statements cannot be conceived in terms of the consistent application of generally accepted accounting principles such as historical cost. Rather, a fundamental study of the *issues* which underlie the question of comparability is necessary as a precondition for deciding on the appropriate accounting methods by the application of which effective comparability in financial statements can be attained. For example, it may be argued that intercompany comparability of financial statements can be achieved by profit measurement and asset valuation in terms of current replacement cost on the grounds that such statements will provide a relevant basis for the evaluation of the relative performance of different firms through the calculation of realistic rates of return using current costs and prices.

Such a method of accounting, however, will require a departure from the generally accepted accounting principle of historical cost.

The need for a fundamental study of the phenomena which underlie business operations as a necessary precondition for the "true and fair" reporting of the results and position of business firms can be illustrated by the following exchange between the accounting and legal professions on the truth and fairness of financial statements.

The submission of the New Zealand Law Society to the Committee of Inquiry into Inflation Accounting (the Richardson Committee) contained the following statement:

> Where accounts prepared on the historic cost principle show costs and values substantially different from current costs and values, we believe that the obligation of the company, the directors and the auditors under the Act to present accounts showing a "true and fair view" will not be discharged by presenting historic costs.[5]

Concerned that the Law Society's interpretation of the true and fair view was so much wider than the accounting profession had accepted, the Council of the New Zealand Society of Accountants sought legal opinion on the implications of auditors continuing to report a "true and fair view" of financial statements prepared on the historical cost method. The response to the Council's inquiry is revealing:

> While the historical cost method if *properly carried through* will *almost certainly be true* and *in most cases fair*, the question of whether it is fair varies with the circumstances and must be specifically considered by those responsible in the circumstances.[6] (Emphasis added.)

The reply illustrates the difficulties encountered when attempts are made to relate general standards such as truth and fairness (which themselves depend on subjective judgments) to the workings of a practical discipline such as accounting. One may ask, for example, in which circumstances is the historical cost method "properly carried through" so that it will "almost certainly be true" and in "most cases fair"? In which circumstances is the application of the historical cost method *not* true? If the "proper" application of the historical cost method will "almost certainly be true" and in "most cases fair," what are the apparently "rare" cases when it will not be "true" and not "fair"?

## AN ACCOUNTING INTERPRETATION OF THE TRUE AND FAIR VIEW

The interpretation of the true and fair view implied in current ac-

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[5] *The Report of the Committee of Inquiry into Inflation Accounting* (Wellington: New Zealand Government Printer, 1976), par. 3.09.

[6] New Zealand Society of Accountants, "A 'True and Fair View' Section 153(1) of the Companies Act 1955," *Accountants' Journal* (February 1978): 34.

counting practice is not in accordance with the popular understanding of these terms. Rather, the truth and fairness referred to are assumed to have a technical meaning in the financial reporting context — financial statements are deemed to be true and fair if they are prepared on the basis of current accounting methods and procedures. The reasoning behind this interpretation is rather circular — financial statements are true and fair if they are prepared in terms of current accounting practice — therefore, financial statements which are prepared on the basis of current accounting practice are true and fair. In this respect, accountants in New Zealand (and accountants in other countries which follow the British precedent) are not very different from their American counterparts who have been explicitly qualifying the "fairness" of financial statements in terms of generally accepted accounting principles. A similar qualification is implicit in the N.Z. audit report. Recently, some N.Z. audit reports have explicitly qualified the truth and fairness of financial statements in terms of the historical cost convention.

The foregoing does not mean that accounting methods and procedures are necessarily arbitrary or that the accounting profession is not concerned with financial reporting standards. Accounting methods are generally logically conceived. A major problem is that they are not conceived and evaluated in terms of a fundamental frame of reference for the solution of accounting problems in the context of a changing environment.

There are signs, however, that the position may be changing. For example, *Statement of Financial Accounting Concepts No. 2: Qualitative Characteristics of Accounting Information* issued by the Financial Accounting Standards Board in the United States (May 1980) commented about the reliability of accounting information as follows: "Accounting information is reliable to the extent that users can depend on it to represent the economic conditions or events that it purports to represent" (par. 62). If this attitude regarding the reliability of accounting information is firmly adopted, a big step would be taken toward the formulation of the frame of reference that is necessary for the critical evaluation of accounting methods and procedures.[7]

[7] The most significant aspect of the frame of reference proposed by the FASB (in particular, in "Statement of Financial Accounting Concepts No. 1: Objectives of Financial Reporting of Business Enterprises" and "Statement of Financial Accounting Concepts No. 2," quoted above) in dealing with the very complex problem of "fairness" ("truth and fairness") in financial reporting has been the recognition of the economic nature of the decisions based on financial information and the economic nature of the resources and obligations of business enterprises and the events which underlie their operations. In countries which follow the British precedent of a standard of "a true and fair view" prescribed by

**A DEFINITIVE APPROACH TO THE TRUE AND FAIR VIEW REQUIREMENT**

The practical application of any standard requires its expression in terms of specific methods and procedures. In the field of financial reporting, the objective of giving a true and fair view has been translated into practical guidelines by way of official pronouncements by the accounting profession in the form of statements of standard accounting practice. The objective of such official accounting standards is stated to be "... to improve the quality and uniformity of reporting and introduce a definitive approach to the concept of what is a true and fair view."[8]

By way of general guidelines, a true and fair view is stated to imply "... disclosure and appropriate classification and grouping of all material items, and consistent application of acceptable accounting principles."[9]

By way of specific guidelines, pronouncements on standard accounting practice deal with problem areas in accounting such as inventory valuation, depreciation, accounting for income tax, consolidation of financial statements, and the disclosure of the accounting policies applied in the preparation of particular financial statements.

Professional statements of standard accounting practice have led to improvement in financial reporting in a number of ways: by promoting the standardization of reporting practices; by requiring a higher level of disclosure than current specified company legislation; by being more flexible than legislation in meeting the needs of a changing environment; and by requiring disclosure of departures from statements of standard accounting practice when the effects of the departure are material.

The lack of a frame of reference for the solution of accounting problems, however, has meant that, of necessity, the profession has had to

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legislation, "truth" and "fairness" in the financial reporting context may be regarded as legal concepts which must ultimately be interpreted by the courts. On the other hand, "income," "state of affairs," or "financial position" are economic notions, and it is difficult to conceive "a true and fair view" of them in other than economic terms. In the United States, the standard of "fairly present" has been defined by the profession. The interpretation of the standard in terms of GAAP, however, has no immunity from being challenged in the courts. In the ultimate analysis, it is hard to conceive interpretation of the standards other than in terms of an ability to reflect the underlying reality associated with the operations and state of business enterprises in other than economic terms. The frame of reference proposed by the FASB is a recognition of this fact.

[8] Council of the New Zealand Society of Accountants, "Explanatory Foreword to Statements of Standard Accounting Practice," par. 1.2.

[9] Ibid.

adopt an "ad hoc" approach in meeting the exigencies of practice — problems have been considered as they have arisen and to a large extent in isolation. While this approach has yielded what may be described as "acceptable" solutions (at the time) to some accounting problems, other problems have proved singularly intractable, such as the problem of accounting for price changes.

## SOME CONCLUSIONS

There is a strong case for persisting with the broad objective and standard in financial reporting of presenting a true and fair view. The very problems involved in the interpretation of the concept in practical situations provide a stimulus for a continuing critical examination of accounting methods and procedures and of the quality and relevance of the statements they produce. Admittedly, there are risks, as the primary interpretation must be the popular interpretation of the key words. There are also problems, not the least of which arise from the nature of business operations and the diversity of users of financial statements. There will also be problems because financial reporting is performed in a changing environment and in the face of conflicting interests.

The problems associated with giving a true and fair view of the results and state of affairs of business enterprises are unlikely to yield to a convenient formula solution, one which will ultimately absolve accountants from the need to use judgment and continuously to review existing accounting methods and procedures. Rather a more realistic prognosis is for a continual striving for a fuller understanding of the meaning and practical significance of the concepts of truth and fairness in a changing world, in the face of diverse and conflicting interests, and with full recognition of the problems inherent in the accounting measurement process. Only in this manner will our profession discharge the duty it owes to the society which it purports to serve.

Obviously, at any point in time the interpretation of the true and fair view requirement in practice will be in terms of the accounting methods and procedures of that time. What is less evident but of vital importance is the role of the true and fair view objective in shaping the development and evolution of and giving meaning to accounting practice over time. To some extent, the forces motivating progress in financial reporting will be the result of external pressure on a profession averse to change; but, hopefully, their main source will be a purposeful effort on the part of the profession to consider the problems of financial

measurement and reporting to achieve the desired, if elusive, end of a true and fair view.

In recent years, there has been a growing recognition that financial statements deal with economic events and that dissatisfaction with current financial reporting stems primarily from the failure of financial statements to reflect truthfully and fairly those economic events which constitute the operations of business enterprises. This development is important. To conceive truth and fairness in an economic context will give this paramount legal requirement the tangibility and dynamism needed to become the shaping force behind the evolution of reporting practice.[10]

That the concept of truth and fairness which will evolve from such developments will ever be fully in line with what one may call a "popular" conception of the terms is unlikely. On the other hand, continuing evolution of accounting principles and techniques so that financial statements better reflect the reality of business operations, and an increasing awareness by financial statement users of the nature of the economic events which represent the operations of business enterprises and of the constraints which operate on accounting measurement and reporting at a given time may well serve to bring the "popular" conception of the true and fair view closer to that reflected in financial statements.

**REFERENCES**

American Institute of Certified Public Accountants. *Report of the Study Group on the Objectives of Financial Statements.* New York: AICPA, 1973.

R. Baxt. "True and Fair View: A Legal Analysis." *The Accountants' Journal* (April 1968): 301-10.

T. K. Cowan. "Are Truth and Fairness Generally Acceptable?" *Accounting Review* (October 1965): 788-94.

Financial Accounting Standards Board. "Statement of Financial Accounting Concepts No. 1: Objectives of Financial Reporting by Business Enterprises." Stamford, Conn.: FASB, 1978.

———. "Statement of Financial Accounting Concepts No. 2: Qualitative Characteristics of Financial Information." Stamford, Conn.: FASB, 1980.

D. Flint. "The Significance of the Standard True and Fair View." 1980 Invitation Lecture, New Zealand Society of Accountants.

T. R. Johnston. "Is the Standard 'True and Fair View of the State of Affairs' Attainable in a Balance Sheet?" *Accountants' Journal* (July 1967): 443-52.

[10] For an example of a dynamic frame of reference for the definition and evaluation of accounting principles, see B. Popoff, "Postulates, Principles and Rules," *Accounting and Business Research* (Summer 1972): 182-93.

———. "The Legal Implications of Inflation Accounting." *Accountants' Journal* (June 1979): 167-71.

National Companies and Securities Commission. "A True and Fair View and the Reporting Obligations of Directors and Auditors." Consultative Paper. Canberra: Australian Government Publishing Service, 1984.

B. Popoff. "Postulates, Principles and Rules." *Accounting and Business Research* (Summer 1972): 182-93.

F. J. O. Ryan. "A True and Fair View." *Abacus* (December 1967): 95-108.

———. "A True and Fair View Revisited." *Australian Accountant* (February 1974): 8-10, 13-16.

# *The Capital Structure Policies of U. K. Companies: A Comparative Study*

STEPHEN E. SKOMP and C. W. R. WARD*

Financial theory remains somewhat inconclusive concerning capital structure management in that, on the one hand, it is argued that capital structure has no effect on the value of the firm while, on the other, it is suggested that the firm might with benefit carry 100 percent debt.[1] The empirical evidence on leverage management and the existence of an "optimal" capital structure is similarly inconclusive.[2] Numerous studies have explained the relationship between the cost of capital and changes in firms' capital structure.[3] However, some studies show that, for example, the cost of capital increases with leverage; others show that the cost of capital decreases or is invariant to changes in leverage. It is fair to say that the issue remains unresolved.

Nevertheless, management responsibilities continue within the real world in the absence of crisp academic guidance; it is, therefore, important to establish how practitioners think when considering financial

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[1] See, for example, F. Modigliani and M. Miller, "The Cost of Capital, Corporation Finance and the Theory of Investment," *American Economic Review* (June 1958): 261-97; "Taxes and the Cost of Capital: A Correction," *The American Economic Review* (June 1963): 433-43; and M. Miller, "Debt and Taxes," *Journal of Finance* (May 1977): 261-75.

[2] The term "leverage" is synonymous with "gearing" as it is used in U.K. financial literature.

[3] Some examples include R. S. Hamada, "The Effect of the Firm's Capital Structure on the Systematic Risk of Common Stocks," *Journal of Finance* (May 1972): 435-52; R. Masulis, "Effects of Capital Structure Change on Security Prices" (Ph.D. thesis, The University of Chicago, 1977); J. Warner, "Bankruptcy, Absolute Priority, and the Pricing of Risky Debt Claims," *Journal of Financial Economics* (May 1977): 239-76; and J. F. Weston, "A Test of Capital Propositions," *Southern Economic Journal* (October 1963): 105-12.

decisions relating to debt policy. Is there great diversity in their beliefs about the effect of debt on the firm's capital structure? Do practitioners believe in an optimal debt level? If so, is there similarity across firms, across industries, or even perhaps across international boundaries? The purpose of this paper is to provide insight into these and related questions of financing policies by comparing the results of surveys of United Kingdom (U.K.) companies with the results of a prior U.S. study.[4]

The data are the product of questionnaires sent to the managing directors of the three hundred largest U.K. limited companies which were listed in the 1982 edition of the *Times 1000* and which were not controlled by foreign management groups.[5] On the latter point, Exxon and Shell, for example, were considered to be influenced by policies derived outside the British management environment and were, therefore, not included in the survey. This policy of exclusion meant that 38 percent of the top five hundred firms listed by turnover (sales) were not sent inquiries in order to make the study comparable with the Scott and Johnson survey of large American firms.[6]

Seventy-three firms responded to the survey. Of these, sixty-one completed questionnaires. The balance of responses consisted of letters and comments either providing insufficient information or declining to reply because of management or board policy. The usable replies thus provided a response rate of 20.3 percent. This compares favorably with the 21.3 percent response rate achieved by Scott and Johnson, although neither rate is particularly outstanding. These rather limited response levels have become the rule rather than the exception in academic research for a number of reasons.[7] The authors found it both interesting and encouraging, however, that 50 percent of those responding to the survey indicated a willingness to discuss their answers.[8]

The paper contains five sections. First, it analyzes a series of questions to ascertain whether firms do subscribe to the concept of optimal leverage. Then it examines a distribution of leverage targets and seeks to identify factors which influence such target levels. The third section explores alternative definitions of debt capacity while section four

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[4] D. F. Scott, Jr. and D. J. Johnson, "Financing Policies and Practices in Large Corporations," *Financial Management* (Summer 1982): 51-59.

[5] Turnover (or sales) ranged in size from £17 billion for the largest firm to £50 million for the smallest firm. In dollar equivalents, this approximates a range of $27 billion to $80 million per annum.

[6] Scott and Johnson, "Financial Management."

[7] Ibid., for elaboration on this point.

[8] Checking for nonresponse bias revealed no difference by size in companies replying to the questionnaire. All companies not responding to the first mailing were approached a second time. Again, although the secondary response was very limited, there was no observable bias.

outlines how leverage is defined and measured by responding firms. The paper concludes with a commentary on the empirical findings.

## OPTIMAL LEVERAGE

A large majority of responding executives apparently agree with the assertion that capital structure is extremely important because of its effect on the market value of ordinary shares.[9] The respondents were asked three questions concerning the relationship between the cost of capital and capital structure. In each instance, at least 90 percent indicate a belief that leverage and capital costs are closely related. They accept that a "proper" amount of debt results in a *lower* overall cost of capital to the company and that the use of an *excessive* amount of debt eventually results in an *increase* in the cost of debt. Also, 93 percent believe that the use of an excessive amount of debt will eventually result in the market price of their company's ordinary shares being adversely affected. These results are consistent with those reported by Scott and Johnson for American executives. So, regardless of both empirical and theoretical debate on the issue, practicing executives unquestionably follow the traditional view regarding financial structure.

## ACCEPTABLE LEVERAGE TARGETS

It is one thing to believe that there may be an optimal degree of leverage and quite another to practice it. Consequently, the authors were interested in the level of leverage perceived to be optimal by the British firms, and the factors influencing their perceptions.

Participants were asked about their firm's target proportion of long-term debt to all long-term sources of financial capital. Exhibit 1 reports the results of that question. Both U.K. and U.S. results are given because of their apparent differences. Note first that a relatively large number of U.K. executives (31 percent) did not respond to this question compared with the Scott and Johnson response sample of 9 percent.

Second, the distribution of target ranges for the U.K. sample is less symmetrical than that for the larger U.S. sample. Although the modal classes are similar, the target ranges for U.K. firms are more widely dispersed: 0-20 versus 46-50. The authors believe that these results are not inconsistent with those of Scott and Johnson in that they tend to demonstrate that most U.K. companies actively set target debt ratios. The conflict in dispersion and the number of nonresponses to the question suggest, however, the possibility of some degree of behavioral dif-

[9] R. J. Briston, *The Stock Exchange and Investment Analysis* (London: George Allen & Unwin Ltd., 1970), p. 331.

**Exhibit 1. Participant Firm's Target Proportion of Long-Term Debt to All Long-Term Sources of Financial Capital**

| | Number | | Percent (%) | | Cumulative percentage | |
|---|---|---|---|---|---|---|
| Range | U.K. | U.S. | U.K. | U.S. | U.K. | U.S. |
| 0-20 | 7 | 17 | 12 | 8 | 12 | 8 |
| 21-25 | 3 | 19 | 5 | 9 | 17 | 17 |
| 26-30 | 11 | 61 | 18 | 29 | 35 | 46 |
| 31-35 | 6 | 46 | 10 | 22 | 45 | 68 |
| 36-40 | 5 | 27 | 8 | 13 | 53 | 81 |
| 41-45 | 0 | 4 | 0 | 2 | 53 | 83 |
| 46-50 | 9 | 10 | 15 | 5 | 68 | 88 |
| 50+ | 1 | 8 | 2 | 3 | 70 | 91 |
| No response | 19 | 20 | 31 | 9 | 100 | 100 |
| Total | 61 | 212 | 100 | 100 | | |

ference. Examination of the factors which might influence U.K. executive decisions would help to identify these differences.

The respondents were asked to rank, in order of importance, the institutions which influence the setting of their company's target financial structure ratios. Exhibit 2 lists the institutions and analysis of the respondent results. The rankings may be interpreted as follows: 87 percent of U.K. respondents indicated that internal management was the greatest influencing factor while 2 percent think internal management ranked second in importance. The composite ranking is but a weighted average of these rankings where the smaller composite rank is consistent with greater influence on setting acceptable debt levels.

**Exhibit 2. Rank-Ordered Institutional Factors which Influence the Setting of Participant Company's Target Leverage Ratios**

| | Rank (%) | | | | Composite ranking | |
|---|---|---|---|---|---|---|
| | 1 | | 2 | | | |
| Type of influence | U.K. | U.S. | U.K. | U.S. | U.K. | U.S. |
| Internal management | 87 | 85 | 2 | 7 | 1.41 | 1.31 |
| Merchant bankers | 5 | 3 | 38 | 39 | 4.03 | 4.31 |
| Clearing bankers | 5 | 0 | 7 | 9 | 4.93 | 5.58 |
| Trade creditors | 0 | 1 | 2 | 0 | 6.41 | 7.11 |
| Security analysts | 2 | 1 | 11 | 4 | 5.03 | 5.78 |
| Industry ratios | 3 | 3 | 25 | 23 | 4.52 | 5.06 |
| Other | 0 | 7 | 0 | 18 | 6.93 | 6.84 |
| Total | 100% | 100% | | | | |

Optimal leverage might be expected to depend on such factors as the leverage of similar firms, the expected rate and stability of the return on investment within the firm, and the acceptability of the assets of the firm as security to lenders.[16] Each of these factors is represented in exhibit 2. Industry ratios are for similar firms, expectations are represented by the influence of internal management, and security to lenders is indicated by the attention paid to the merchant banking community. Of course, we recognize that these institutions do not represent only the assumed factors. Merchant banks advise on market timing and set the price and method of capital issues. The importance of these institutions, therefore, might also plausibly be interpreted as a market factor. Not surprisingly, these three are easily the most important influencial factors to setting appropriate debt levels, both for U.K. and U.S. enterprises. The degree of importance can, however, be overstated. A marked difference between first choice, internal management, and second choice, merchant bankers, exists. That is, internal management is by far the principal influence, receiving 87 percent of the number one rankings, while merchant bankers and industry ratios are more similar to one another in relative importance at 38 and 25 percent of the number two rankings, respectively. Furthermore, a separate question was posed regarding the specific use of industry norms in determining a financing decision where only 36 percent of the U.K. respondents answered in the affirmative. If this is surprising, the fact that U.S. respondents replied affirmatively to the same question 53 percent of the time appears similarly curious.

Actually, the results make considerable sense. Management, both in the United Kingdom and the United States, tends to rely principally on internal judgments, seeking input from the banking community, as well as observing the policies of similar firms. Industry norms may well be used mainly to confirm financing decisions, however, and may rarely be referred to if a disagreement exists between the members of the board and their advisers. Perhaps more to the point, U.K. industries may be less homogeneous than their U.S. counterparts, in which case management is less likely to rely on "industry" information such as financial ratios.

Whatever the reasons, this disparity in use of industry norms may well explain much of the difference in the two distributions of leverage target ranges discussed earlier. A closer adherence to industry norms would surely result in a smaller dispersion of the financial leverage distribution.

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[16] Ibid., p. 338.

Respondents were asked if the concept of "systematic risk" as typically measured by "beta coefficients" affects their financial structure policy. Theoretically, beta coefficients are more appropriate indicators of relevant risk than are industry norms. While U.K. firms may not rely heavily on the latter for guidance, they may well recognize the advantages of the former. Such is not the case, however, as an overwhelming "No" was recorded by 85 percent of the executives involved. A similar response was evident in the Scott and Johnson study.

### DEBT CAPACITY

Although, as expected, respondents believe that the proportion of debt would influence the cost of capital, the importance of the choice of debt level is unclear. One could, for example, believe that a firm's cost of capital could be reduced as a result of lower debt and still anticipate massive debt financing as being reasonable, although suboptimal, at some "acceptable" price. Consequently, participants were asked if their firm believes that there is some *maximum* amount of debt financing that should not be surpassed and if so, how it is defined. Eighty-five percent affirmed a belief in the concept of debt capacity. Defining that capacity was far less straightforward.

The question was open ended, and the responses (summarized in exhibit 3) ranged widely, from an "impossible to define," to a precise percent for a given debt ratio. Scott and Johnson had a similar problem, so their format was used for comparative purposes.

**Exhibit 3. Participant Firm Standards for Defining Debt Capacity**

| | Percent using | | |
|---|---|---|---|
| | First 300 | First 500 | Second 500 |
| Standard | U.K. | U.S. | U.S. |
| Long-term debt/Total capital | 11 | 29 | 24 |
| Long-term debt/Net worth | 33* | 5 | 23 |
| Long-term debt/Total assets | 5 | 2 | 3 |
| Interest coverage | 2 | 5 | 7 |
| Most adverse cash flow | 0 | 5 | 3 |
| Debt covenants | 5 | 5 | 2 |
| Maintain bond rating | 0 | 21 | 6 |
| Industry norm | 2 | 2 | 3 |
| Other | 21** | 12 | 10 |
| No response | 21 | 14 | 19 |
| Total | 100 | 100 | 100 |

* This category includes debt/equity responses.
** "Circumstances" were reported to dictate debt capacity for 13 percent of the total responses.

Fifty percent of the respondents describe debt capacity in relation to some level of debt to capital employed. The specific type of debt (long-term, net, total, or just debt) remains ambiguous, however, as does the nature of capital (total, equity, net worth, total assets). This emphasis on capital structure relationships is consistent with the Scott and Johnson findings, particularly for the second five hundred group, which is similar in structure to the present sample.

Looking beyond the debt ratios, differences between U.K. and U.S. environments emerge in the lower half of exhibit 3. For example, British managers seem relatively less interested in the cash flow and interest coverage definitions, and relatively more concerned with the effect of variable economic conditions. Also British executives do not define debt capacity in terms of bond rating risks while American managers are more prone to do so. This is not surprising since bond rating of U.K. securities is strictly mechanical and is noncomprehensive in nature. Maintenance of good capital and income leverage ratios ensures reasonable bond ratings in the United Kingdom. By contrast in the United States, bond ratings are determined by subjective assessment of managerial capability, market potential, and general economic environment.

#### LEVERAGE MEASUREMENT

In the section concerning leverage targets, the respondents were offered specific debt ratios. Later in the debt capacity section, they were given *carte blanche* in describing leverage. The result, as mentioned earlier, was an array of debt-related ratios. Anticipating this ambiguity, the authors asked several additional questions to illuminate how British executives define and measure leverage. If it is important to discover the level at which a company can be regarded as over levered, then leverage must be measured. The technique of measurement will depend, however, on definition of leverage.[11]

First, the executives were asked if their firm uses some specific measure of leverage as a constraint on the mix of debt and ordinary shares employed. Ninety-three percent responded positively to this question. Then they were asked how their firm measures the degree of financial leverage used. They were to rank eight alternative measures of leverage in order of importance. Fortunately, a ninth alternative, "other," was also provided. The eight alternative leverage measures were drawn from the Scott and Johnson survey for comparison purposes. Exhibit 4 shows the results of this rank ordering.

[11] Ibid.

**Exhibit 4. Participant Measures of Financial Leverage**

| | Rank | | | Composite ranking | |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | | |
| Measure | U.K. | U.K. | U.K. | U.K. | U.S. |
| Debt ratio | 5% | 15% | 31% | 7.07 | 8.43 |
| Long-term debt/Total capital | 3 | 0 | 6 | 8.30 | 4.05 |
| Common equity ratio | 13 | 6 | 26 | 7.02 | 9.14 |
| Long-term debt ratio | 3 | 0 | 6 | 8.18 | 8.94 |
| Long-term debt/Net worth | 15 | 9 | 0 | 7.10 | 6.19 |
| Times-Interest-Earned | 11 | 46 | 31 | 4.93 | 5.37 |
| Times-Interest plus Dividend coverage | 2 | 15 | 0 | 7.87 | 9.06 |
| Cash flow coverage | 0 | 0 | 0 | 8.87 | 8.20 |
| Other | 48 | 9 | 0 | 4.61 | 8.72 |
| Total | 100% | 100% | 100% | | |

The composite ranking scores demonstrate once again the diversity of leverage ratios in use across British firms. The lowest score, 4.61, was achieved by the category, "other," which also garnered 48 percent of the number-one rankings. Analysis of "other" suggests only that British executives as a group use a wide variety of definitions for leverage, with most based on some form of debt ratio as opposed to cash flow or some measure of relative interest burden. Had the authors felt justified in squeezing the various "other" debt ratios into one or another of the five definitions already provided, the times-interest-earned category probably would have remained the second choice with the average ranking of 4.93.

The fact remains that, in spite of the existing policy for U.K. bond ratings to give equal emphasis to capital and income leverage ratios, British executives place a higher value on capital leverage ratios when measuring financial leverage for decision-making purposes. This conclusion is consistent with the authors' earlier analysis of debt capacity (exhibit 3) which demonstrated a marginally greater interest by U.K. firms in capital leverage information. Since the leverage measurement alternatives listed in exhibit 4 can be identified as representng either balance sheet or income statement information, further analysis of this point is possible as exhibit 5 indicates.

All responses relevant to exhibit 4, including those placed into the "other" category, were reclassified according to source of financial information. Although no firm indicated sole reliance on income statement-based information, fourteen firms or 23 percent of the respondents

**Exhibit 5. Information Sources Emphasized by Participants for Leverage Measurement Purposes**

| | Balance sheet based only | Income statement based only | Use of both types | Other | Total |
|---|---|---|---|---|---|
| *Number* | | | | | |
| United Kingdom | 14 | 0 | 45 | 2 | 61 |
| United States | 37 | 1 | 169 | 5 | 212 |
| *Percent* | | | | | |
| United Kingdom | 23 | 0 | 74 | 3 | 100 |
| United States | 17 | 0 | 80 | 2 | 100 |

use only balance sheet-based debt ratios. A majority of 74 percent, however, use both sources of information to evaluate leverage risk. While the overall results are not dissimilar to the U.S. experience, the greater U.K. emphasis on capital leverage information is evident.

Participants were also asked if their firm's calculations of the various financial leverage measures allow for any fixed lease payment as a financing charge similar to interest expense. Twenty-three percent indicate that their firms do not have lease payment obligations. Of those that do lease assets, only 36 percent suggest that they adjust for leasing-based liabilities. This is a marked contrast with the Scott and Johnson experience where 76 percent of the American respondents did allow for lease contracts in leverage evaluations.

These results parallel the differences which have existed in the financial disclosure requirements of the Council of the Institute of Chartered Accountants in England and Wales (CICA) and the Financial Accounting Standards Board (FASB) as they apply to financial leases. While the CICA has been slow to offer standards which require adequate recognition of the financial risk inherent in leasing obligations, FASB No. 13, issued November 1976, spells out in detail the conditions under which the leases must be capitalized and the procedures for capitalizing it. It is very tempting to conclude that official statements of accounting standards committees not only improve financal disclosure to the advantage of investors but also focus managements' attention on areas that should be important to them. Hitherto, one might have felt secure in the belief that managements already were aware of such matters and that setting accounting standards concerned the flow of information to outsiders.

Lastly, executives were requested to indicate whether book values or market values are employed in their leverage computations. No

doubt, book values are preferred. Ninety percent favored book values, although 5 percent suggested both book and current values. This latter tendency is five times as great as the American experience. The present authors did not pursue just how dual usage was employed analytically.

## CONCLUSIONS

It is important to emphasize that these remarks are based on an analysis of responses made by British executives to a questionnaire concerning financial policies of their respective firms. These participant firms represent approximately 20 percent of the three hundred largest British-controlled limited companies traded on the London Stock Exchange. Generalizations on the total population of British-controlled firms must at best remain tentative.

Practicing U.K. executives tend to follow the traditional view that the level of leverage will influence both the overall cost of capital and the ordinary share price. However, while there is a central tendency toward a leverage target consistent with the American experience, a great deal of dispersion in this important policy area exists.

Similarly, while U.K. managers respect the limits of debt utilization, they have diverse notions as to what constitutes debt capacity and how it should be measured. They tend to rely more heavily on balance sheet information than on income-related data when evaluating or setting debt policy, and such information most frequently remains unadjusted for the affects on leverage risk of financial leasing arrangements or changing market values of capital sources.

Overall, one remains impressed by the similarity between U.K. and U.S. financing policies. For the most part, inconsistency seems to arise in areas influenced more by domestic realities than marked managerial independence. The internationalization of financial management policy is certainly in evidence.

# *Evaluating Foreign Affiliates: The Impact of Alternative Foreign Currency Translation Methods*

AHMAD HOSSEINI and RAJ AGGARWAL*

The managerial implications of the procedures used for the translation of foreign currency accounts are receiving renewed interest due to the continuing instability in foreign exchange markets and increased levels of foreign trade and international investment. In the current study, various foreign currency translation methods are analyzed according to their suitability to appraise foreign affiliate performance.

Evaluation of divisional performance in a multidivision company ordinarily involves a comparison of the accounting data reporting the results of division endeavors to an established standard and/or to the results of other divisions. In a multinational company, some divisions may be located in foreign countries, and the basic accounting records of those divisions are usually stated in terms of foreign currencies. In such a situation, managerial appraisal by corporate headquarters is generally based on the foreign affiliate's accounting statements that not only have been made to conform to generally accepted accounting principles (GAAP) of the home country but have also been translated into the currency of the headquarters country.[1]

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[1] See, for example, Dhia AlHashim, "Internal Performance Evaluation in American Multinational Enterprises," *Management International Review*, vol. 20, no. 3 (1980): 33-39; Helen G. Morsicato, *Currency Translation and Performance in Multinationals* (Ann Arbor, Mich.: University of Michigan Press, 1980); Francis A. Lees, *Reporting Transnational Business Operations* (New York: The Conference Board, 1980); William Persen and Van Lessing, *Evaluating the Financial Performance of Overseas Operations* (New York: Financial Executives Re-

While accounting standards may prescribe the translation procedure to be used for financial reporting purposes, there are a number of reasons why a firm may choose a different translation procedure for evaluating its foreign affiliates. One reason for doing so may relate to the widely held view that the same translation procedure may not be suitable for all companies and that the use of a uniform but often inappropriate translation procedure results in financial statements that may seriously distort the underlying economic relationships.[2] Managerial implications of procedures used to translate foreign currency accounts are, therefore, very important in the performance evaluation of foreign affiliates.

This paper investigates the suitability of various foreign currency translation methods for use by the corporate headquarters in appraising the divisional performance of overseas affiliates. The translated return on investment (ROI) for a twelve-year period was selected as the output of a simulation model developed for this study. The computer simulation model is used to evaluate ROIs for sixteen model subsidiaries with different asset and financial structures and dividend policies. The simulation analyzed seven different types of exchange rate movements to evaluate the effects of four different translation methods. It next examined the resulting 5,376 ROIs to determine which translation method results in a reported ROI with the least amount of distortion.[3]

search Foundation, 1980); Edward H. Jones, "Decision-Making Based on Foreign Financial Statements," *Financial Executive* (February 1981): 32-35; James Czechowicz, Frederick D. S. Choi, and Vinod B. Bavishi, *Assessing Foreign Subsidiary Performance, Systems, and Practices of Leading Companies* (New York: Business International, 1982); and M. E. W. Kelly and G. C. Philippatos, "Comparative Analysis of Foreign Investment Evaluation Practice by U.S.-Based MNCs," *Journal of International Business Studies* (Winter 1982): 19-42.

[2] See, for example, Sidney M. Robbins and Robert B. Stobaugh, "The Bent Measuring Stick for Foreign Subsidiaries," *Harvard Business Review* (September-October 1973); Raj Aggarwal, "FASB No. 8 and Reported Results of Multinational Operations: Hazards for Managers and Investors," *Journal of Accounting, Auditing, and Finance* (Spring 1978): 197-216; Marjorie T. Stanley and S. B. Block, "Response by U.S. Financial Managers to FAS No. 8," *Journal of International Business Studies* (Fall 1978): 89-99; and James A. Schweikart, "We Must End Consolidation of Foreign Subsidiaries," *Management Accounting* (August 1981): 15-18.

[3] Several studies show that most companies in the United States use ROI to evaluate their domestic and overseas divisional investments. These studies also found that most MNCs evaluate their foreign operations using exactly the same basis as their domestic counterparts. See National Association of Accountants, "Return on Capital as a Guide to Managerial Decisions," *Research Report Number 33* (New York: NAA, 1959), Edward C. Bursk et al., *Financial Control of Multinational Operations* (New York: Financial Executives Research Foundation, 1971); Robbins and Stobaugh, "Bent Measuring Stick"; Richard F. Vancil, *Decentralization: Managerial Ambiguity by Design* (New York: Financial Ex-

This study concludes that no one translation method is most appropriate or yields significantly superior results in all circumstances. The temporal method, however, was found generally to result in the greatest level of distortion in reported ROI, while the all-current method generally resulted in the smallest amount of distortions in reported ROI. The results of this study should be useful in understanding how the translated ROI is affected by other factors such as the company's asset composition, capital structure, and the pattern of movement of exchange rates.

## PERFORMANCE EVALUATION IN AN MNC

Performance evaluation of foreign subsidiaries is a complex issue. The environment for international operations is generally not as uniform as that for domestic operations; for example, multinational corporation (MNC) affiliates operate in environments of greatly varying inflation rates, as well as differing economic, political, and social elements. Performance evaluation of foreign affiliates may also be complicated by the use of transfer prices to minimize taxes or to transfer funds between affiliates. Furthermore, by distorting the underlying economic relationships, the translation of foreign affiliate accounts in an environment of changing exchange rates further complicates the process used for performance evaluation in an MNC.[4]

One of the major problems facing the performance evaluation process in an MNC is that the foreign affiliate's records and accounts must be in local currencies and must conform to local accounting principles, standards, and procedures, while the parent company of most MNCs must consolidate and report all foreign affiliate accounts in common currency and in conformance with a single set of accounting principles, standards, and procedures. A common currency and conformance to the same set of accounting standards are generally also necessary to

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ecutives Research Foundation, 1979); Morsicato, *Currency Translation;* and Peter Brownell, "The Role of Accounting Data in Performance Evaluation, Budgetary Participation, and Organizational Effectiveness," *Journal of Accounting Research* (Spring 1982): 12-27.

[4] A complete discussion of the problems of evaluating foreign affiliates is beyond the scope of this paper, especially since they have been discussed extensively elsewhere. The focus of this paper is the impact of the translation procedure used on performance evaluation for a foreign affiliate. For a more complete discussion of the problems in evaluating foreign affiliates, see, for example, Robbins and Stobaugh, "Bent Measuring Stick"; AlHashim, "Internal Performance Evaluation"; Persen and Lessing, *Overseas Operations;* Brownell, "Accounting Data"; and Czechowicz, Choi, and Bavishi, *Foreign Subsidiary Performance.*

facilitate the forecasting, monitoring, and comparison of the operating results of these various foreign subsidiaries.[5]

Several different procedures have been developed for translation of foreign subsidiary accounts for financial reporting purposes. Four of these have received significant attention. Although a comprehensive review of these methods is beyond the scope of the paper, the following paragraphs present a brief description.[6]

#### The Current-Noncurrent Method

This method is the traditional method first recommended by the American Institute of Certified Public Accountants (AICPA) in 1931 and restated in Chapter 13 of its *Accounting Research Bulletin No. 43.* According to this method, the balance sheet classification of assets and liabilities determines the exchange rate that should be employed in translation. Current items are to be translated at the current exchange rate, while noncurrent items are to be translated at the historical rate, that is, the rate which existed when the asset or liability was originally recorded.

Revenue and expense items, except depreciation and other similar balance sheet-related expense items, are translated at the average exchange rate for the accounting period. Depreciation expense is translated at the historical rate applied to the asset being depreciated. Any exchange gain is deferred while the exchange loss is applied against any deferred gain, and, if there is no deferred gain, the loss is included in the current period income statement.

#### The Monetary-Nonmonetary Method

This method was first discussed widely in the 1950s and was further publicized by the National Association of Accountants in its 1960 *Re-*

[5] A number of empirical studies have confirmed these requirements and preferences of MNC headquarters regarding the reporting and use of foreign affiliate accounts including the classic empirical studies by J. M. McInnes, "Financial Control Systems for Multinational Operations: An Empirical Investigation," *Journal of International Business Studies* (Fall 1971): 11-28; and Robbins and Stobaugh, "Bent Measuring Stick" that found that most U.S.-based MNCs use U.S. dollar information to evaluate a foreign division's performance. Similar results have been obtained in more recent surveys of MNC evaluation by Morsicato, *Currency Translation;* Persen and Lessing, *Overseas Operations;* Czechnowicz, Choi, and Bavishi, *Foreign Subsidiary Performance;* and Kelly and Philippatos, "Foreign Investment Evaluation Practices."

[6] For details of these four different translation procedures, see, for example, Leonard Lorensen, "Reporting Foreign Operations of U.S. Companies in U.S. Dollars," *Accounting Research Study No. 12* (New York: American Institute of Certified Public Accountants, 1972); Aggarwal, "FASB No. 8"; and Morsicato, *Currency Translation.*

*search Report No. 36*. This method uses the monetary characteristics of assets and liabilities as the basis for selecting an appropriate exchange rate for translation. Assets and liabilities are considered monetary if they are expressed in terms of a fixed number of currency units. Cash, accounts receivable, and accounts payable are examples of monetary items. According to this method, monetary items are translated at the current rate, while nonmonetary items are translated at the historical rate. The translation of income statement items and the treatment of exchange gain or loss under this method are similar to those under the current-noncurrent method.

#### The Temporal Method

The temporal method was recommended in the 1972 AICPA research study by Leonard Lorensen. This method recognizes that the accounting principle used to measure assets and liabilities should not be changed as a result of the translation process. For example, inventories recorded at cost in the foreign statements are translated at the exchange rate that existed when the asset was acquired. If the inventories were recorded at current market value, however, a current exchange rate at the balance sheet is used to translate the account.

According to this method, the current rate should be used to translate all monetary items and those nonmonetary balance sheet items which are not reflected at their historical cost but are carried on a current value basis. When translating nonmonetary balance sheet items carried at historical cost, the appropriate historical rate should be used. Income statement items are translated in a manner similar to that under the current-noncurrent method. *Financial Accounting Standard No. 8* issued by the Financial Accounting Standards Board (FASB) in 1975 was based on this method. FAS No. 8 required that translation gains and losses be recognized immediately in the income statement.

#### The All-Current Method

This method, first proposed by the English and Scottish Institutes of Chartered Accountants and the basis for *Financial Accounting Statement No. 52,* translates all assets and liabilities at the current exchange rate in effect at the balance sheet date. Under FAS No. 52, the translation of balance sheet accounts depends on the functional currency of the foreign affiliate. For example, if the functional currency is the local currency, the balance sheet is translated using the all-current method. If the functional currency is the U.S. dollar, however, the balance sheet is translated using procedures substantially under FAS No. 8. Income statement accounts are translated in a manner similar

to that under the current-noncurrent method. Under FAS No. 52, translation gains and losses need not be included in reported income and can be shown as adjustments to a separate category of the equity account.

Thus, as this brief discussion indicates, at least four different translation procedures may be used to translate various local currency foreign affiliate accounts to accounts denominated in a common currency for worldwide performance evaluation. These different accounting procedures for the translation of foreign affiliate financial statements, however, usually provide different and sometimes conflicting results when applied to the same set of foreign currency accounts. In the process of translating foreign statements, a local currency profit may decrease or change into a loss or, vice versa, a loss in terms of the local currency may change into profit when translated into U.S. dollars.[7]

In view of these differences in translation procedures, which of the many translation methods is most suitable for calculating the ROI used in the appraisal and control of foreign operations: the temporal method, the monetary-nonmonetary method, the current-noncurrent method, or the all-current method? This study investigates the impact of using these different translation methods on the evaluation and reported financial performance of a foreign affiliate. More specifically, under what conditions will a translation method result in a reported ROI with the least amount of distortion?

## RESEARCH METHODOLOGY

A simulation model was used to examine the usefulness of translated ROIs as a measure of performance evalaution for MNC foreign affiliates under each of the four different translation procedures outlined earlier.[8] As a first step, local currency financial statements of an affiliate were generated using Zieha's accounting model designed to output a series of balance sheets and income statements on a "what if" basis. This model consists of accounting identities depicting the operation of a typical manufacturing firm. For example, the model assumes that sales are a fixed percentage of the gross fixed assets, that most costs are a fixed percentage of sales, and that depreciation is 10 percent of fixed

[7] See, for example, Aggarwal, "FASB No. 8"; Morsicato, *Currency Translation;* and Schweikart, "Consolidation of Foreign Subsidiaries."

[8] The use of simulation procedures in accounting research seems to be well accepted. See, for example, Yaw M. Mensah and L. F. Biagioni, "The Predictive Ability of Financial Ratios Using Alternative Translation Methods for Foreign Currency Financial Statements: A Simulation Study," *International Journal of Accounting* (Fall 1980): 221-45.

assets. Thus, in this first step, the model is used to generate the local currency accounts for a foreign affiliate.[9]

There may, however, be substantial differences in the translated results for subsidiaries with different financial structures, operating policies, and other characteristics. For instance, under most translation methods, a highly levered subsidiary tends to generate smaller translation losses or gains for the same change in the exchange rate than does a subsidiary financed solely with equity since in such a case, the exposed liabilities balance more of the exposed assets. Similarly, a subsidiary with a large amount of working capital will be affected more by changes in the exchange rate than a subsidiary with a smaller amount of working capital. To account for these variations, the current study adapts and significantly extends Zieha's basic accounting model by undertaking appropriate computer programming to accomplish the goals of this research. The extended model is used to generate the local currency financial statements for foreign affiliates with varying levels of debt, fixed assets, and working capital. In addition to these adaptations, the model was also extended to translate foreign affiliate accounts for each of the four different translation methods and to generate and use seven different exchange rate patterns.

The internal rate of return (IRR) is used as a criterion to evaluate the translated ROI generated by the simulation model.[10] The IRR for each of the model subsidiaries used in this research is computed based on the original dollars invested by the MNC in the subsidiary, the dollar amounts of dividends received each year during the assumed twelve-year life of the subsidiary, and the dollar amounts received as a result of selling the subsidiary at its net worth at the end of this twelve-year period. The internal rate of return from each subsidiary, therefore, depends on the exchange rate at the time the subsidiary is purchased, the rate at the times when the dividends are paid, and the rate at the

[9] See Eugene L. Zieha, "An Accounting Model for Business Policy Analysis — Series 70, Program 714" (teaching material, University of Missouri at Columbia, n.d.).

[10] One characteristic of investments in fixed, productive assets is that the returns which they promise are likely to extend over fairly long spans of time. Therefore, in approaching investment decisions, it is necessary to employ techniques that recognize the time value of money. A technique which gives full recognition to the time value of money is internal rate of return (IRR). The international rate of return can be defined as the true interest yield promised by an investment project over its useful life. Because of this fact, this return is used as the criterion to evaluate the translated ROIs obtained under each of the four translation methods. For a further discussion of this topic see, for example, NAA, "Return on Capital"; Vancil, *Decentralization;* and Kelly and Philippatos, "Foreign Investment Evaluation Practices."

time the subsidiary is sold. The IRR so calculated is used to evaluate the translated ROIs obtained by comparing the sum over twelve years of the absolute values of the percentage deviation of the ROI from the internal rate of return.

Exhibit 1 describes briefly the financial structure, asset composition, and dividend policies of the sixteen different types of foreign affiliates considered in this study. Foreign affiliate types are distinguished by their dfferent levels of debt (0, 20, or 40 percent of total assets), capital intensity (fixed assets at 30 percent or 70 percent of total assets), inventory as a proportion of current assets (70 percent or 30 percent),

**Exhibit 1. Description of Subsidiary Types**

**No. 1:** Company has no debt, pays no dividend, 70 percent of its total assets are inventories, and 30 percent of its current assets are inventories.

**No. 2:** Company has no debt, pays dividend, 70 percent of its total assets are fixed assets, and 30 percent of its current assets are inventories.

**No. 3:** Company has no debt, pays no dividend, 70 percent of its total assets are fixed assets, and 70 percent of its current assets are inventories.

**No. 4:** Company has no debt, pays dividend, 70 percent of its total assets are fixed assets, and 70 percent of its current assets are inventories.

**No. 5:** Company has no debt, pays no dividend, 30 percent of its total assets are fixed assets, and 30 percent of its current assets are inventories.

**No. 6:** Company has no debt, pays dividend, 30 percent of its total assets are fixed assets, and 30 percent of its current assets are inventories.

**No. 7:** Company has no debt, pays no dividend, 30 percent of its total assets are fixed assets, and 70 percent of its current assets are inventories.

**No. 8:** Company has no debt, pays dividend, 30 percent of its total assets are fixed assets, and 70 percent of its current assets are inventories.

**No. 9:** Company has large debt, pays no dividend, 70 percent of its total assets are fixed assets, and 30 percent of its current assets are inventories.

**No. 10:** Company has large debt, pays dividend, 70 percent of its total assets are fixed assets, and 30 percent of its current assets are inventories.

**No. 11:** Company has large debt, pays no dividend, 70 percent of its total assets are fixed assets, and 70 percent of its current assets are inventories.

**No. 12:** Company has large debt, pays dividend, 70 percent of its total assets are fixed assets, and 70 percent of its current assets are inventories.

**No. 13:** Company has large debt, pays no dividend, 30 percent of its total assets are fixed assets, and 30 percent of its current assets are inventories.

**No. 14:** Company has large debt, pays dividend, 30 percent of its total assets are fixed assets, and 30 percent of its current assets are inventories.

**No. 15:** Company has large debt, pays no dividend, 30 percent of its total assets are fixed assets, and 70 percent of its current assets are inventories.

**No. 16:** Company has large debt, pays dividend, 30 percent of its total assets are fixed assets, and 70 percent of its current assets are inventories.

and by their policy with regard to the payment of dividends (0 or 100 percent). Thus, the study is able to evaluate most major types of variations typically found among the foreign affiliates of an MNC. Similarly, exhibit 2 briefly describes the seven patterns of exchange rate changes considered in this study. Again, the objective was to capture and represent the essence of the patterns of variations in exchange rates that are most commonly found to occur in practice. Thus, the simulation model developed and used in this study is normative, and, while it does not try to approximate the behavior of an actual firm, it provides useful results in assessing the impact of using alternative translation procedures on the evaluation of foreign affiliates.

In this study, the operations of each of the sixteen types of foreign affiliates are simulated over a twelve-year period. Translated ROIs are calculated for each of the twelve years using each of the four translation procedures under the seven different patterns of exchange rate movement. Thus, the simulation model used in this study made 5,376 calculations (16 affiliate types $\times$ 12 years $\times$ 7 exchange rate patterns $\times$ 4 translation methods). Absolute deviations of the ROIs from the IRR are calculated for each of the 448 ($16 \times 7 \times 4$) cases obtained when the sixteen subsidiary types are evaluated for each of seven exchange rate patterns for each of the four translation procedures. These overall results are presented in exhibit 3 and form the basis of the analysis presented in the next section.

**Exhibit 2. Patterns of Exchange Rate Movement Examined**

**Set 1:** The value of foreign currency remains constant during the 12-year period.

**Set 2:** The value of the foreign currency strengthens by 50 percent at the beginning of year 3. Then it remains stable at the new level for the remaining life of the simulation.

**Set 3:** The value of the foreign currency deteriorates by 50 percent at the beginning of year 3. It remains stable at the new level for the remaining life of the simulation.

**Set 4:** The value of foreign currency strengthens by a constant percentage (10 percent) every year during the 12-year simulated life.

**Set 5:** The value of foreign currency deteriorates by a constant percentage (10 percent) every year during the 12-year simulated life.

**Set 6:** The value of foreign currency initially strengthens and then deteriorates by a constant percentage (10 percent) during the life of the simulation.

**Set 7:** The value of foreign currency initially deteriorates and then strengthens by a constant percentage (10 percent) during the life of the simulation.

**Exhibit 3. Absolute Deviation of Reported ROI from the IRR**

| SSOP | Exchange rate set | Translation method A* | B** | C† | D‡ | SSOP | Exchange rate set | Translation method A* | B** | C† | D‡ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Set 1 | 8.3 | 8.3 | 8.3 | 8.3 | | Set 1 | 17.2 | 17.2 | 17.2 | 17.2 |
| | Set 2 | 51.0 | 47.3 | 34.3 | 34.2 | | Set 2 | 61.5 | 49.5 | 49.3 | 46.9 |
| | Set 3 | 64.6 | 56.8 | 56.8 | 56.8 | | Set 3 | 57.8 | 61.9 | 98.0 | 52.9 |
| SSOP 1 | Set 4 | 136.2 | 43.2 | 96.9 | 96.2 | SSOP 9 | Set 4 | 148.5 | 70.5 | 117.0 | 70.5 |
| | Set 5 | 120.1 | 23.8 | 23.4 | 23.8 | | Set 5 | 114.9 | 35.7 | 51.5 | 34.5 |
| | Set 6 | 8.4 | 73.6 | 43.6 | 43.8 | | Set 6 | 14.5 | 60.0 | 58.4 | 58.9 |
| | Set 7 | 4.8 | 69.4 | 59.1 | 58.8 | | Set 7 | 9.9 | 66.6 | 91.0 | 67.0 |
| | Set 1 | 0.0 | 0.0 | 0.0 | 0.0 | | Set 1 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Set 2 | 65.8 | 54.8 | 40.3 | 40.4 | | Set 2 | 76.5 | 57.9 | 68.3 | 55.0 |
| | Set 3 | 95.4 | 66.1 | 65.9 | 66.1 | | Set 3 | 107.7 | 74.5 | 213.5 | 74.5 |
| SSOP 2 | Set 4 | 128.4 | 23.0 | 71.4 | 70.4 | SSOP 10 | Set 4 | 130.8 | 62.8 | 99.3 | 56.3 |
| | Set 5 | 127.2 | 29.7 | 29.0 | 29.7 | | Set 5 | 130.8 | 55.0 | 238.3 | 55.0 |
| | Set 6 | 50.4 | 85.5 | 46.6 | 47.1 | | Set 6 | 74.4 | 94.7 | 85.3 | 86.3 |
| | Set 7 | 45.6 | 77.1 | 57.1 | 57.2 | | Set 7 | 63.5 | 84.6 | 131.2 | 81.6 |
| | Set 1 | 8.5 | 8.5 | 8.5 | 8.5 | | Set 1 | 16.7 | 16.7 | 16.7 | 16.7 |
| | Set 2 | 51.2 | 47.1 | 34.2 | 34.3 | | Set 2 | 61.4 | 60.1 | 49.1 | 53.6 |
| | Set 3 | 64.4 | 56.4 | 56.4 | 56.4 | | Set 3 | 57.8 | 72.1 | 98.4 | 53.4 |
| SSOP 3 | Set 4 | 136.2 | 44.2 | 96.4 | 94.7 | SSOP 11 | Set 4 | 148.3 | 71.9 | 115.4 | 71.9 |
| | Set 5 | 120.1 | 24.3 | 23.5 | 24.3 | | Set 5 | 115.2 | 37.1 | 52.1 | 34.4 |
| | Set 6 | 8.4 | 73.4 | 43.6 | 43.7 | | Set 6 | 14.4 | 60.4 | 58.9 | 58.0 |
| | Set 7 | 4.9 | 69.3 | 59.2 | 58.6 | | Set 7 | 9.8 | 68.8 | 91.7 | 68.5 |
| | Set 1 | 0.0 | 0.0 | 0.0 | 0.0 | | Set 1 | 0.5 | 0.5 | 0.5 | 0.5 |
| | Set 2 | 65.8 | 55.2 | 40.3 | 40.4 | | Set 2 | 75.8 | 68.6 | 68.2 | 59.7 |
| | Set 3 | 95.4 | 66.4 | 65.9 | 66.4 | | Set 3 | 108.7 | 84.6 | 214.1 | 80.6 |
| SSOP 4 | Set 4 | 128.4 | 24.1 | 71.3 | 68.9 | SSOP 12 | Set 4 | 131.6 | 66.3 | 99.9 | 59.8 |
| | Set 5 | 127.2 | 30.2 | 29.1 | 30.2 | | Set 5 | 131.4 | 56.6 | 240.6 | 56.7 |
| | Set 6 | 50.4 | 84.6 | 46.7 | 47.5 | | Set 6 | 74.3 | 100.5 | 83.7 | 89.3 |
| | Set 7 | 44.4 | 78.5 | 57.5 | 57.6 | | Set 7 | 64.5 | 88.6 | 131.0 | 84.1 |

| SSOP | Exchange rate set | Translation method A* | B** | C† | D‡ | SSOP | Exchange rate set | Translation method A* | B** | C† | D‡ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Set 1 | 1.8 | 1.8 | 1.8 | 1.8 | | Set 1 | 1.7 | 1.7 | 1.7 | 1.7 |
| | Set 2 | 44.0 | 56.9 | 36.0 | 35.8 | | Set 2 | 44.1 | 53.9 | 37.6 | 33.7 |
| | Set 3 | 67.3 | 79.7 | 81.6 | 79.7 | | Set 3 | 67.6 | 72.5 | 94.2 | 72.5 |
| SSOP 5 | Set 4 | 125.1 | 21.5 | 110.3 | 109.7 | SSOP 13 | Set 4 | 125.4 | 23.9 | 112.6 | 104.5 |
| | Set 5 | 122.0 | 12.3 | 11.3 | 12.3 | | Set 5 | 121.4 | 15.1 | 33.4 | 15.1 |
| | Set 6 | 5.1 | 94.7 | 29.8 | 28.8 | | Set 6 | 4.4 | 88.5 | 33.1 | 30.7 |
| | Set 7 | 5.0 | 90.3 | 57.3 | 56.4 | | Set 7 | 4.3 | 83.6 | 72.5 | 56.1 |
| | Set 1 | 0.0 | 0.0 | 0.0 | 0.0 | | Set 1 | 0.3 | 0.3 | 0.3 | 0.3 |
| | Set 2 | 51.8 | 63.6 | 43.1 | 42.8 | | Set 2 | 52.0 | 60.5 | 45.2 | 40.1 |
| | Set 3 | 79.7 | 87.6 | 90.4 | 87.6 | | Set 3 | 80.5 | 81.5 | 105.2 | 81.5 |
| SSOP 6 | Set 4 | 123.6 | 12.5 | 106.8 | 106.2 | SSOP 14 | Set 4 | 124.2 | 12.9 | 110.2 | 100.5 |
| | Set 5 | 123.6 | 12.3 | 11.2 | 12.3 | | Set 5 | 123.6 | 14.7 | 46.7 | 14.7 |
| | Set 6 | 18.6 | 100.0 | 22.1 | 22.6 | | Set 6 | 20.1 | 95.3 | 26.1 | 24.4 |
| | Set 7 | 22.2 | 95.1 | 55.1 | 54.5 | | Set 7 | 23.4 | 89.6 | 72.0 | 54.0 |
| | Set 1 | 2.0 | 2.0 | 2.0 | 2.0 | | Set 1 | 2.4 | 2.4 | 2.4 | 2.4 |
| | Set 2 | 44.0 | 57.1 | 36.1 | 35.5 | | Set 2 | 44.1 | 54.1 | 37.7 | 33.2 |
| | Set 3 | 67.3 | 80.0 | 81.6 | 80.0 | | Set 3 | 67.5 | 73.6 | 95.1 | 73.6 |
| SSOP 7 | Set 4 | 125.0 | 22.8 | 109.8 | 108.1 | SSOP 15 | Set 4 | 125.3 | 25.8 | 112.1 | 102.3 |
| | Set 5 | 121.0 | 13.5 | 11.2 | 13.5 | | Set 5 | 121.7 | 17.0 | 35.0 | 17.0 |
| | Set 6 | 4.1 | 90.4 | 29.3 | 27.2 | | Set 6 | 4.9 | 85.2 | 33.3 | 30.1 |
| | Set 7 | 3.9 | 86.3 | 57.7 | 55.6 | | Set 7 | 5.2 | 82.1 | 73.1 | 54.2 |
| | Set 1 | 0.0 | 0.0 | 0.0 | 0.0 | | Set 1 | 0.3 | 0.3 | 0.3 | 0.3 |
| | Set 2 | 50.6 | 63.2 | 41.9 | 41.3 | | Set 2 | 52.0 | 61.1 | 45.2 | 39.5 |
| | Set 3 | 79.7 | 88.2 | 90.4 | 88.2 | | Set 3 | 80.5 | 82.0 | 104.2 | 82.0 |
| SSOP 8 | Set 4 | 123.6 | 13.0 | 106.8 | 104.7 | SSOP 16 | Set 4 | 124.2 | 13.4 | 110.3 | 99.2 |
| | Set 5 | 123.6 | 13.5 | 11.2 | 13.5 | | Set 5 | 123.7 | 16.5 | 46.6 | 16.5 |
| | Set 6 | 18.6 | 96.5 | 22.1 | 22.8 | | Set 6 | 20.1 | 91.3 | 26.1 | 25.1 |
| | Set 7 | 22.2 | 91.9 | 55.1 | 54.1 | | Set 7 | 23.5 | 87.3 | 72.0 | 53.1 |

SSOP: Subsidiary Structure and Operating Policy.
* A is the all-current method.
** B is the temporal method.
† C is the current-noncurrent method.
‡ D is the monetary-nonmonetary method.

## ANALYSIS OF THE RESULTS

In this study, the reported ROI is analyzed in relation to the three major factors considered to be the major causes of distortion in reported profit performance and reported ROI for foreign affiliates. These three major factors are (1) translation method used to translate the foreign affiliate financial statements; (2) the nature of the firm's balance sheet, particularly its working capital and fixed asset composition, and its capital structure and dividend payment policies; and (3) the pattern of exchange rate movement.

While it is not possible to reduce to a few broad generalizations the manner in which each of these factors influences the reporting of foreign operations, the authors plan to develop in this paper a basis for understanding the impact of these factors on the performance measurement process in an MNC.

To understand how the use of a particular combination of the translation method, the foreign affiliate structure, and the pattern of exchange rate changes distort the reported ROI, the impact of the translation on both the numerator and the denominator of the ROI ratio must be explained. In calculating the ROI, the numerator is the subsidiary's translated net income while the denominator is the translated equity of the subsidiary. The exchange loss or gain resulting from the translation changes the numerator of the ROI calculation. The exchange gain or loss resulting from a change in foreign currency has two principal components,[11] the first consisting of the loss or gain which results from balance sheet accounts translated at the current exchange rate. The second component consists of the impact of income statement items translated at the historical rate of exchange, that is, items such as depreciation on fixed assets that are related to balance sheet accounts translated at the historical exchange rate change. The denominator of the ROI calculation, the translated net equity of the foreign subsidiary, is also impacted by the translation procedure used since the net equity is the difference between the translated value of the assets and the translated value of the liabilities. Changes in exchange rates impact the translated value only of the assets and liabilities that are translated at the current rate and, therefore, are considered exposed. The translation method, by indicating the balance sheet accounts that must be translated at the current rate, determines the net exposure of a foreign subsidiary and the translated value of its equity. Thus, the translation

[11] It should be noted that in this study, all four of the translation methods result in the same twelve-year total translation gain or loss as far as balance sheet translations are concerned, and the difference between the methods relates only to the timing of its recognition.

method used impacts both the numerator and denominator of the reported ROI.

**Impact of the Translation Procedure**

As discussed previously, the four translation methods undertaken for analysis in this study are the all-current, temporal, current-noncurrent, and monetary-nonmonetary methods. The ROIs generated by each of the four translation procedures are assessed for each of the 112 cases obtained when the sixteen subsidiay types are evaluated for each of the seven exchange rate patterns. The results are presented in exhibit 4.

**Exhibit 4. Distortion Levels with the Four Translation Methods for Different Patterns of Exchange Rate Changes**

| Translation methods | Pattern of exchange rate changes 1 | 2 | 3 | 4 | 5 | 6 | 7 | Overall |
|---|---|---|---|---|---|---|---|---|
| The ALL-CURRENT Method | | | | | | | | |
| The least distortion | 0 | 0 | 50 | 0 | 0 | 100 | 100 | 36 |
| The most distortion | 0 | 50 | 25 | 100 | 88 | 0 | 0 | 38 |
| Neither the least nor the most distortion | 0 | 50 | 25 | 0 | 12 | 0 | 0 | 12 |
| No difference in distortion | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| TOTAL % | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| The TEMPORAL Method | | | | | | | | |
| The least distortion | 0 | 0 | 31 | 88 | 37 | 0 | 0 | 22 |
| The most distortion | 0 | 50 | 0 | 12 | 0 | 100 | 75 | 34 |
| Neither the least nor the most distortion | 0 | 50 | 69 | 0 | 63 | 0 | 25 | 30 |
| No difference in distortion | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| TOTAL % | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| The CURRENT-NONCURRENT Method | | | | | | | | |
| The least distortion | 0 | 25 | 12 | 0 | 50 | 12 | 0 | 14 |
| The most distortion | 0 | 0 | 75 | 0 | 12 | 88 | 25 | 28 |
| Neither the least nor the most distortion | 0 | 75 | 13 | 100 | 38 | 0 | 75 | 44 |
| No difference in distortion | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| TOTAL % | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| The MONETARY-NONMONETARY Method | | | | | | | | |
| The least distortion | 0 | 75 | 31 | 25 | 44 | 0 | 0 | 25 |
| The most distortion | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Neither the least nor the most distortion | 0 | 25 | 69 | 75 | 56 | 100 | 100 | 61 |
| No difference in distortion | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| TOTAL % | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

These results should be of interest to a security analyst or manager who is comparing companies or subsidiaries with different asset and capital structures or different dividend policies.

For a given translation method and a given exchange rate pattern, the data presented in exhibit 4 indicate the percentage of cases when that translation method was ranked the best, worse, or in-between in terms of the level of distortion in the translated ROI. For example, for the exchange rate pattern number 4, the temporal method gave the least amount of distortion for fourteen of the sixteen subsidiary types (88 percent). For the exchange rate pattern number 6, however, this method resulted in the largest amount of distortion in reported ROI for all sixteen subsidiary types.

The results in the overall column of this table indicate that in 36 percent of the 112 cases, the all-current method gives the best results. When this result is compared to the results obtained for other translation procedures, it is clear that the reported ROI under the all-current method gave rise to the lowest level of distortion in most cases. The monetary-nonmonetary method, which achieved the second highest rating in this regard, resulted in the least amount of distortion in 25 percent of the cases. An examination of the "most distortion" figures in exhibit 4 reveals that the all-current method also achieved the highest rating in this category since in 38 percent of the cases this method resulted in the most amount of distortion. The temporal method, which had the second highest rating in this category, resulted in the highest level of distortion in 34 percent of the cases. It should be noted that in 16 of 112 cases shown in exhibit 4, a translation method could not be classified having either the least or the most distortion. These 16 cases refer to the situation under exchange rate set 1 when the foreign currency is stable and does not change over the twelve-year period examined. In this situation, all translation methods resulted in the same level of distortion. Thus, it seems that there is no one method of translation that can clearly be demonstrated to the best method on an overall basis.

### Impact of the Exchange Rate Pattern

Since no one translation procedure seems to be the best on an overall basis, an examination of the influence of the type of exchange rate pattern on the level of distortion for a given subsidiary type for each of the four translation procedures might be useful. Exhibits 5 and 6 present a classification of the sixteen subsidiary types that give the least (exhibit 5) and the most (exhibit 6) levels of distortion in reported ROI for each of the seven patterns of exchange rate changes under

**Exhibit 5. Subsidiary Structures for Which a Translation Method Gives the Least Distortion**

| Exchange rate pattern | Translation method: All-current | Temporal | Current-noncurrent | Monetary-nonmonetary |
|---|---|---|---|---|
| A. Exchange rate strengthening: | | | | |
| a. Set-2 | — | — | 2, 3, 4, 11 | 1, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16 |
| b. Set-4 | — | 1, 2, 3, 4, 5, 6, 7, 8, 9*, 11*, 13, 14, 15, 16 | — | 9*, 10, 11*, 12 |
| B. Exchange rate weakening: | | | | |
| a. Set-3 | 5, 6, 7, 8, 13, 14, 15, 16 | 1*, 3*, 10* | 2, 3*, 4 | 1*, 3*, 9, 10*, 11, 12 |
| b. Set-5 | — | 10*, 12, 13*, 14*, 15*, 16* | 1, 2, 3, 4, 5, 6, 7, 8 | 9, 10*, 11, 13*, 14*, 15*, 16* |
| C. Exchange rate fluctuating: | | | | |
| a. Set-6 | 1, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 | — | 2, 4 | — |
| b. Set-7 | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 | — | — | — |

* More than one method is ranked the same for this subsidiary type.

each of the four translation procedures. As exhibit 5 indicates, for example, the all-current method results in the least level of distortion in reported ROI for all sixteen subsidiary types under the fluctuating exchange rate set number seven. This method also gives the least amount of distortion under the other pattern of fluctuating exchange rates (number six) for all subsidiary types except two and four when the current-noncurrent method is best. Similarly, the data in exhibit 6 indicate that under the fluctuating exchange rate set six, the temporal method is worst for all sixteen subsidiary types. Again, the only general conclusion that can be drawn from exhibits 5 and 6 is that the nature of the exchange rate pattern greatly influences the choice of the translation method for the least amount of distortion.

**Exhibit 6. Subsidiary Structures for Which a Translation Method Gives the Most Distortion**

| Exchange rate pattern | Translation method: All-current | Temporal | Current-noncurrent | Monetary-nonmonetary |
|---|---|---|---|---|
| A. Exchange rate strengthening: | | | | |
| a. Set-2 | 1, 2, 3, 4, 9 10, 11, 12 | 5, 6, 7, 8, 13, 14, 15, 16 | — | — |
| b. Set-4 | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 | — | — | — |
| B. Exchange rate weakening: | | | | |
| a. Set-3 | 1, 2, 3, 4 | — | 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 | — |
| b. Set-5 | 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 13, 14, 15, 16 | — | 10, 12 | — |
| C. Exchange rate fluctuating: | | | | |
| a. Set-6 | — | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 | — | — |
| b. Set-7 | — | 1, 2, 3, 4, 5, 6, 7, 8, 13, 14, 15, 16 | 9, 10, 11, 12 | — |

#### Role of the Balance Sheet Structure

A major factor affecting the reported ROI for the subsidiary of an MNC is the composition of the subsidiary's working capital and its capital structure. For example, if assets translated at the current rate exceed the liabilities translated at the current rate, then with a foreign devaluation (revaluation), the firm faces an immediate translation loss (gain) when its foreign accounts are translated (using any translation method). Therefore, the impact of a change in the composition of the subsidiary balance sheet on the degree of distortion in the translated ROI is examined next.

The information presented in exhibits 7, 8, and 9 illustrate the answers to the following three questions: (1) What is the impact of a

**Exhibit 7. Relative Distortion with the Four Translation Methods for the Two Levels of Debt Capital**

| Relative distortion | All current: No debt (Percentages) | All current: With debt (Percentages) | Temporal: No debt (Percentages) | Temporal: With debt (Percentages) | Current-noncurrent: No debt (Percentages) | Current-noncurrent: With debt (Percentages) | Monetary-nonmonetary: No debt (Percentages) | Monetary-nonmonetary: With debt (Percentages) |
|---|---|---|---|---|---|---|---|---|
| Least distortion | 34 | 36 | 16 | 7 | 32 | 5 | 32 | 37 |
| Most distortion | 41 | 32 | 38 | 29 | 7 | 22 | 7 | 2 |
| Neither the least nor the most | 25 | 32 | 46 | 64 | 61 | 73 | 61 | 61 |
| | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

change in the debt structure of the subsidiary on the reported ROI under different translation methods (exhibit 7)? (2) What is the impact of a change in the proportion of current assets on the reported ROI under each of the four translation methods (exhibit 8)? and (3) What is the impact of a change in the level of inventories as a proportion of a firm's current assets on the reported ROI under a different translation method (exhibit 9)?

To examine the *effect of foreign affiliate debt financing* on translated ROI, two different subsidiary structures were assumed. This assumption was made because holding size constant, a highly debt-levered subsidiary will be less affected by changes in the exchange rate than a subsidiary financed with equity, since it is likely to have a smaller net exposure.[12] Under the first group of eight subsidiary structures chosen in this research, the subsidiaries are assumed to have no debt in the composition of their balance sheet. Subsidiary types 1 through 8 are classified in this group. Under the second group of eight subsidiary structures, part of the total subsidiary financing is assumed to have been provided through local borrowing. Thus, subsidiary types 9 through 16 have some local currency debt in their balance sheets. In addition, to facilitate comparison, each of the eight subsidiaries in the first set is paired with one of the subsidiaries in the second set. Each pair has the same asset composition and the same level of total assets. For example, subsidiary type 1 is exactly the same as subsidiary type 9 in terms of asset composition; the

[12] Since only debt that must be repaid in foreign currency is subject to translation, debt denominated in the parent company currency can be considered as equity for the purposes of this analysis.

only difference between these two subsidiary types is the existence of debt in the capital structure of subsidiary type 9, while subsidiary type 1 has no debt in its capital structure. The same relationship exists between subsidiary types 2 and 10, subsidiary types 3 and 11, 4 and 12, 5 and 13, 6 and 14, 7 and 15, and 8 and 16.

As the figures presented in exhibit 7 indicate, the level of debt in a subsidiary's capital structure can have a major impact on the degree of distortion in reported ROI under a given translation procedure. For example, exhibit 7 indicates a remarkable shift in the ranking of the current-noncurrent method of translation, and, when the subsidiaries have no debt in their capital structure, this method results in the lowest level of distortion in reported ROI for 32 percent of the cases; it also results in the highest level of distortion in 7 percent of the cases, while in 61 percent of the cases, it is neither the best nor the worst method. When debt is added to the subsidiary's capital structure, however, these percentages changed drastically to 5, 22, and 73 percent, respectively. On the other hand, the ranking for the all-current and the monetary-nonmonetary methods change little when debt is added to the subsidiary capital structure.

On an overall basis, at least two conclusions can be drawn from the information in exhibit 7. First, variations in the capital structure of a subsidiary can have a significant impact on the degree of distorton in the translated ROI. Second, the impact of this variation on the foreign affiliate capital structure is not uniform for the four translation methods, being the worst for the current-noncurrent translation method.

To examine the *effect of the level of inventories* on translated ROI, the sixteen subsidiary types were once again grouped into two categories of eight subsidiary types, each based on two different levels of inventory. In each of the eight pairs of subsidiary types, the first subsidiary type has a small amount of inventory in the composition of its balance sheet and the second subsidiary type a large portion of its current assets in the form of inventories. Thus, both subsidiary types in each pair are the same in all other financial aspects except the level of their inventories. Exhibit 8 presents the impact of a translation method on reported ROI when the level of inventory is changed.

As can be seen in exhibit 8, the usefulness of the temporal method and of the monetary-nonmonetary method was most affected by the exchange rate when the level of inventory changed. Under the temporal method, only cash, accounts receivable, and marketable securities are translated at current rates. Under this method, when the level of inventory increases, the subsidiary's proportion of exposed assets will de-

**Exhibit 8. Relative Distortion in Reported ROI with the Four Translation Methods for Two Levels of Inventory**

| | Translation method | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | All-current | | Temporal | | Current-noncurrent | | Monetary-nonmonetary | |
| Relative distortion | Small inven. (Percentages) | Large inven. | Small inven. (Percentages) | Large inven. | Small inven. (Percentages) | Large inven. | Small inven. (Percentages) | Large inven. |
| Least distortion | 34 | 34 | 21 | 14 | 13 | 16 | 29 | 21 |
| Most distortion | 38 | 38 | 32 | 32 | 14 | 14 | 0 | 0 |
| Neither the least nor the most | 28 | 28 | 47 | 54 | 73 | 70 | 71 | 79 |
| | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

crease, and its net level of exposed monetary liabilities will increase.[13] Therefore, the level of inventory affects the reported ROI under the monetary-nonmonetary and the temporal translation methods.

As the data presented in exhibit 8 also indicate, when the all-current method of translation is used, there are no changes in the usefulness of the translated ROI, even with different levels of inventory. Similarly, there was very little difference in the ranking of the current-noncurrent method when the level of inventory changed. Thus, the level of inventory did not have an impact on the degree of distortion suffered by the ROI when the all-current or the current-noncurrent methods of translation were used.

To examine the *effect of the level of current assets* on translated ROI, the sixteen subsidiary types were arranged into two groups with different proportions of current assets. Once again, eight pairs of subsidiary types were created with the first subsidiary in each pair having a small proportion of current assets in its balance sheet structure while the second subsidiary in the pair had a large portion of current assets. Exhibit 9 highlights the impact of changes in current asset levels on the degree of distortion in reported ROI under each of the four translation methods.

Exhibit 9 demonstrates that wide disparities exist among the translation methods when the level of current assets is changed. The most re-

[13] The method chosen for inventory valuation for this research is FIFO (first in first out), and it is assumed that the inventory at the end of each year has been acquired at the average exchange rate in effect during the year. Under these conditions, the requirement that inventory be translated using the historical rate results in the use of the average rate for translation of inventory amounts in the balance sheet. This would result in a translation loss upon a revaluation of the foreign currency and a gain upon devaluation.

**Exhibit 9. Relative Distortion of Translation Methods for Two Different Proportions of Current Assets**

| | Translation method | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | All-current | | Temporal | | Current-noncurrent | | Monetary-nonmonetary | |
| Relative distortion | Small C/A | Large C/A | Small C/A | Large C/A | Small C/A | Large C/A | Small C/A | Large C/A |
| | (Percentages) | | (Percentages) | | (Percentages) | | (Percentages) | |
| Least distortion | 25 | 43 | 18 | 21 | 21 | 7 | 29 | 22 |
| Most distortion | 45 | 29 | 21 | 43 | 18 | 14 | 0 | 0 |
| Neither the least nor the most | 30 | 28 | 61 | 36 | 61 | 79 | 71 | 78 |
| | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

markable shift in ranking is for the current-noncurrent method of translation. Under this method, subsidiaries having a large proportion of current assets show a higher loss with a foreign currency devaluation and a higher gain in the case of revaluation. With a low level of current assets, the current-noncurrent method gives the best results in 21 percent of the cases, the worst results in 18 percent of the cases, and in 60 percent of the cases, the method was neither the best nor the worst. When the level of current assets is high, these percentages for this translation method changed to 7, 14, and 79 percent, respectively. Similar large shifts in the usefulness of translation methods other than the monetary-nonmonetary method also take place when the proportion of current assets change. The results presented in exhibit 9, therefore, lead to the conclusion that changes in the proportion of current assets in a subsidiary asset structure is an important consideration in the level of distortion in reported ROI under each translation method other than the monetary-nonmonetary method.

#### Managerial Guidelines

The results presented and analyzed in this paper indicate that a single translation method will not give the same results for different types of subsidiary structures and for different exchange rate patterns. The simulation results suggest that a particular translation method may result in the most amount of distortion in the reported ROI under one set of conditions and the least amount of ROI distortion under a different set of conditions. The purpose of this section is to identify the translation method that results in the lowest level of distortion for a

given subsidiary structure. Such an analysis should be useful, for example, for managers considering various translation procedures for use in evaluating the performance of a given foreign subsidiary. Exhibit 10 presents these results.

Exhibit 10 presents the best translation method for the given subsidiary type for each exchange rate pattern. In this exhibit, the translation method selected as the "best" results in the least distortion in the reported ROI. Only in the case when the exchange rate does not change (Set 1) are all four translation methods equally good. When the foreign currency weakens, there is no strong pattern and only in eight of the thirty-two cases does the manager have a choice of translation method if the level of distortion is to be kept to a minimum. Thus, when the exchange rate weakens, no one translation method is best for all subsidiary types. When the foreign currency strengthens, on the other hand, there are only two cases in Set 4 and four cases in Set 2 when the current-noncurrent translation method is best, and for all other subsidiary types, the monetary-nonmonetary method is best under Set 2 and the temporal method is best under Set 4. When the foreign currency fluctuates in value, the all-current method seems to be the best since, in all cases except for two subsidiary types under Set 6, it results in the least level of distorted ROIs.

Exhibit 10 also indicates that for any given subsidiary type, no one translation method will continue to be the best under varying patterns of exchange rate movement. Thus, while exhibit 10 should be useful to MNC managers who must select one of the four translation methods for use in performance evaluation, it also demonstrates the difficulty of their task! In an era of fluctuating foreign currency values, the last two columns of exhibit 10 indicate that the best translation method under unstable exchange market conditions is the all-current method (except for two subsidiary types under Set 6). It can therefore be argued that as the FASB's (belated) response to the era of widespread fluctuations in exchange rates, FAS No. 52, the new foreign currency translation standard for U.S. MNCs, should reduce the problems faced in evaluating overseas operations.

The managerial implications of the procedures used for the translation of foreign currency accounts have received renewed interest due to the continuing instability in foreign exchange markets and because of the increased levels of foreign trade and international investment. Using a simulation model, the authors analyzed four foreign currency translation methods as to their suitability for appraising foreign affiliate performance.

**Exhibit 10. The Best Translation Method for a Given Subsidiary Structure**

| Subsidiary structure and dividend policy | | | | Exchange rate change pattern* | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Debt | Fixed assets | Inventory | Dividend payout | Foreign currency strengthening | | Foreign currency weakening | | Foreign currency fluctuating | |
| | | | | SET 2 | SET 4 | SET 3 | SET 5 | SET 6 | SET 7 |
| Low debt | Low | LOW | LOW | D | B | A | C | A | A |
| | | | HIGH | D | B | A | C | A | A |
| | | HIGH | LOW | D | B | A | C | A | A |
| | | | HIGH | D | B | A | C | A | A |
| | High | LOW | LOW | D | B | B,D | C | A | A |
| | | | HIGH | C | B | C | C | C | A |
| | | HIGH | LOW | C | B | B,C,D | C | A | A |
| | | | HIGH | C | B | C | C | C | A |
| High debt | Low | LOW | LOW | D | B | A | B,D | A | A |
| | | | HIGH | D | B | A | B,D | A | A |
| | | HIGH | LOW | D | B | A | B,D | A | A |
| | | | HIGH | D | B | A | B,D | A | A |
| | High | LOW | LOW | D | B,C | D | D | A | A |
| | | | HIGH | D | C | B,D | B,D | A | A |
| | | HIGH | LOW | C | B,C | D | D | A | A |
| | | | HIGH | D | C | D | B | A | A |

A = The all-current method.
B = The temporal method.
C = The current-noncurrent method.
D = The monetary-nonmonetary method.
* All four translation procedures are ranked equally well when the exchange rate does not change (Set 1).

In this study, the translated ROI for a twelve-year period was selected as the output simulation model developed for this study. The computer simulation model evaluated ROIs for 16 model subsidiaries with different asset and financial structures, and it analyzed seven different types of exchange rate movements to evaluate the effects of using four different translation methods. It then evaluated the resulting 5,376 ROIs to determine which translation method resulted in a reported ROI with the least level of distortion.

The results of the study indicate that, as expected, the translated ROI is not affected by the foreign currency translation method alone. The translated ROI was affected by a variety of other factors such as the composition of subsidiary structure and its dividend policy, as well as by the pattern of movement of exchange rates. It was found, however, that the temporal method generally generated the greatest level of distortion in reported ROI while the all-current method generally generated the smallest distortions in reported ROI.

The results of the study indicate that no one translation method is most appropriate or yields significantly superior results in all circumstances. Under the all-current method, however, the relationships which exist in local currency terms tend to remain unchanged after the translation. Thus, as expected, the results of this study confirm that in general, and especially in an era of fluctuating exchange rates, the all-current method seems to be the best available method for translating foreign currency financial statements. Since FASB No. 52, the new foreign currency translation procedure for use by U.S.–based MNCs, is based substantially on the all-current method, its widespread adoption should reduce the distortions in reported results of the foreign operations of U.S.–based multinational companies.

**ADDITIONAL REFERENCES**

American Accounting Association, Committee on International Accounting. "An Introduction to Financial Control and Reporting in Multinational Enterprises." *Accounting Review* (Supplement 1973).

American Institute of Certified Public Accountants, Committee on Accounting Procedure and Accounting Terminology. "Restatement and Revision of Accounting Research Bulletins." *Accounting Research Bulletin No. 43.* New York: AICPA, 1960.

Financial Accounting Standards Board. *Statement of Financial Accounting Standard No. 52: Foreign Currency Translation.* Stamford, Conn.: FASB, 1981.

———. *Statement of Financial Accounting Standard No. 8: Accounting for Foreign Currency Financial Statements.* Stamford, Conn.: FASB, 1975.

National Association of Accountants. "Management Accounting Problems in Foreign Operations." *NAA Research Report 36.* New York: NAA, 1960.

# *Finanical Statement Impact of Foreign Currency Translation Alternatives*

JON R. NANCE and ROGER A. ROEMMICH*

## INTRODUCTION

The problem of translating foreign-currency denominated financial statements has been an accounting problem of considerable economic importance for U.S. corporations since the breakdown in the late 1960s of the 1944 Bretton Woods agreement and the beginning of the modern era of floating exchange rates. U.S. corporations used a variety of translation approaches in the late 1960s and early 1970s. Effective January 1976, Statement of Financial Accounting Standard (SFAS) 8 dictated that foreign currency financial statements be consolidated using a single unit of measure, the U.S. dollar. SFAS 8 sparked a continuing controversy detailed in a variety of sources.[1] Typical of the criticism is the following statement by William Strong of Firestone Tire and Rubber Company:

> The shortcomings . . . of SFAS Eight are magnified by the wide swings in currency values. These fluctuations, and the unsound formula for recognizing

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[1] For example, Raj Aggarwal, "FASB No. 8 and Reported Results of Multinational Operations, Hazard for Managers and Investors," *Journal of Accounting, Auditing and Finance* (Spring 1977): 197; Roland Dukes, *An Empirical Investigation of the Effects of SFAS on Security Return Behavior* (Stamford, Conn.: FASB, 1978); Thomas Evans, William Folks Jr., and Michael Jilling, *The Impact of SFAS 8 on the Foreign Exchange Risk Management Practices of American Multinationals: An Economic Impact Study* (Stamford, Conn.: FASB, 1978); and Rita Rodriquez, *Foreign Exchange Management in Multinationals* (Lexington, Mass.: Lexington Books, 1980).

them, produce wild swings in the profit-and-loss statement which don't necessarily reflect economic realities.[2]

Criticism of SFAS 8 caused the Financial Accounting Standards Board (FASB) to commission two research studies on the impact of the standard. Evans, Folks and Jilling studied the effect on management behavior by an elaborate questionnaire sent to four hundred multinational corporations.[3] Although a majority of respondents appeared to be making rational economic decisions without regard to accounting exposure, a substantial number appeared to be taking action to cover accounting exposure, regardless of the economic consequences. In particular, the study provides evidence for increased use of hedging contracts and increased "balance" in exposure to foreign currencies through an increased tendency to denominate monetary assets and liabilities in U.S. currency.[4]

Dukes attempted to detect securities market reaction to events associated with the promulgation of SFAS 8.[5] He found no such reaction. Consideration of the magnitude of the reaction that might be expected and the sensitivity of the tests he employed, however, suggests that his negative results are of limited significance.

After analyzing the results of the commissioned studies, the FASB re-examined SFAS 8. In December 1981, the FASB issued SFAS 52, "Foreign Currency Translation." This new standard, which replaced SFAS 8, was adopted by a four-to-three vote. Thus, the heated debate over foreign currency translation alternatives continues.

The quantitative impact of different foreign currency translation alternatives on financial statements is not, in any statistical sense, generally known. Without knowledge of this impact, debate over the desirability of different alternatives is likely to be misdirected and unproductive. While knowledge of the effects on individual businesses may be known to the financial officers of these businesses, they will not necessarily make this information a part of the public record, nor may it be assumed that their arguments for one alternative over another are anything more than rationalizations for positions based upon covert knowledge of these effects. Moreover, qualitative evaluation of transla-

[2] Peter Revzin, "Bitter Exchange: New Accounting Rules Make Multinationals Alter Their Strategies," *Wall Street Journal* (8 December 1976), p. 1.

[3] Evans, Folks, and Jilling, *Impact of SFAS 8.*

[4] The meaning of "balance" in accounting exposure depends on the translation method in use. Given the method of SFAS Eight, it means equating monetary assets to monetary liabilities. Denominating monetary assets and liabilities in U.S. currency to the extent feasible is a simple method for achieving such "balance."

[5] Dukes, *Investigation of Effects of SFAS 8.*

tion methods based on the fidelity of these methods to one or another set of abstract criteria is of limited utility in selecting an accounting standard for translation.[6] It is possible to imagine a set of account balances for which the choice of method would have no material effect on the results of translation. More importantly, an inferior method, evaluated on the basis of qualitative criteria, may produce superior translation of financial statements because it would produce superior results on accounts that mattered most, and inferior results on accounts that mattered least.

The objective of this paper is to provide a quantitative comparison of the impact of different translation alternatives on financial statements. Five translation methods that have been implemented or seriously proposed in the past decade are studied: the current rate method, the method of SFAS 52, the current/noncurrent method, the monetary/nonmonetary method, and a modification of the monetary/nonmonetary method in which inventory is translated at the current rate. The effects on income and income variability and the long-term effect on stockholders' equity of deferral of the translation gain (as adopted in SFAS 52) are examined.

Examination of the five methods proceeds in three stages. First, a translation model which allows identification and classification of different translation effects is developed. Second, the financial statements of 160 companies are translated into two currencies over a twelve-year interval using each of the five methods. Finally, the results of translation, particularly income and income variability, are examined statistically.

## METHODOLOGY

### Rationale

The best method of comparing foreign currency translation alternatives might seem to take an appropriately selected sample of multinational corporations and translate their financial statements over several time periods using each of the translation alternatives to be tested, but close examination of this method discloses a number of defects.

The data for comparing alternatives are not generally available for existing multinationals. The disclosure requirements of SFAS 8 were not adequate to provide a basis for computing the translation gains and losses that would result if alternative translation methods were used.

[6] For the author's view of qualitative evaluation, see Jon R. Nance and Roger A. Roemmich, "Foreign Currency Translation: An Evaluation," *International Journal of Accounting* (Spring 1983): 29.

Moreover, the data needed for such comparisons are probably not readily available internally in most corporations. Any attempt to obtain data selectively would be expensive and could bias subsequent statistical analysis.

Existing multinationals are only moderately multinational. Most accounting studies of multinationals are based on approximately four hundred corporations. The evidence from Dukes is that this set has revenues from foreign operations that are approximately 20 percent of total revenues and foreign assets that are approximately 12 percent of total assets.[7] The impact of translation alternatives on the financial statements of the companies would be diluted by the size of domestic operations.

Existing multinationals are often widely diversified geographically and engaged in many lines of business. They use many currencies, some appreciating and some depreciating against the dollar. The impact of a particular translation alternative on a particular line of business in a particular exchange environment would be difficult to isolate from this complexity.

The time interval during which SFAS 8 was in effect is short for the collection of information on income variability. Many suspect that the behavior of managers of multinational corporations changed significantly as a result of the adoption of this standard. Anecdotal evidence and the surveys by Rodriguez[8] and Evans, Folks, and Jilling[9] lend some support to these beliefs. If they are valid, comparison of earnings fluctuations before the adoption of SFAS 8 with earnings fluctuations after its adoption would be unsatisfactory even if translated statements of acceptable accuracy could be prepared.

For these reasons, an attempt to compare translation alternatives directly from data for multinationals would be unlikely to be fruitful. The authors have chosen instead to compare translation alternatives by partial translation of the financial statements of a sample of companies with a known functional currency (the dollar) and moderately well-defined lines of business.

The financial statements of a group of 160 domestic corporations were partially translated into two foreign currencies, the deutsch mark (West Germany) and the pound (United Kingdom). The translation period for earnings items was 1967-1978. Balance sheet items were translated from December 31, 1966, to December 31, 1978.

[7] Dukes, *Investigation of Effects of SFAS 8.*
[8] Rodriguez, *Foreign Exchange Management.*
[9] Evans, Folks, and Jilling, *Impact of SFAS 8.*

The problem of management behavior was avoided because the corporations in the sample did not face a significant new problem with the introduction of SFAS 8 and, therefore, did not have a motive to change their practice. The major difficulty with comparing alternatives involved aging assets and liabilities in accounts translated at historical rates. As will be seen, the choice of translation period significantly lessened that difficulty. The methods used were similar to methods already developed for the preparation of approximate general price-level–adjusted financial statements from limited historical cost data, which have in part been empirically validated.[10]

The intent of this study was to obtain a clear picture of the consequences of different translation methods. The currencies into which financial statements were translated, the time interval of translation, and the companies themselves were all chosen primarily to obtain that clear perspective. The methods selected were those considered by the authors to be the most important methods in practice.

#### Translation Methods

Of the translation alternatives seriously proposed or implemented in the past decade, five were chosen for examination. The current rate (CR) method is sometimes advocated for the translation of financial statements based on current values. The SFAS 52 (CS) method is the current standard. The current/noncurrent (CN) method was recommended by Accounting Research Bulletin (ARB) 51 and was frequently used before the promulgation of SFAS 8. The monetary/nonmonetary (MN) method was recommended by Accounting Research Study (ARS) 12 and is, in substance, the method required by SFAS 8. The (MI) monetary/nonmonetary method with inventory translated at the current rate, along with monetary assets, has been advocated by some recent writers and was used by many companies before SFAS 8 went into effect. These five methods are compared throughout this paper.

#### Time Interval

The Bretton Woods agreement of 1945 created the International Monetary Fund and established as a matter of international agreement the policy of maintaining the currencies of the major trading nations

[10] The literature relevant to the production of GPL-adjusted financial statements using Compustat data is fairly extensive. Additional evidence for the validity of using Compustat-based statements for statistical comparisons, along with a review of the earlier arguments, is provided by Arie Baran, Josef Lakonishok, and Aharon Ofer, "The Information Content of General Price Level Adjusted Earnings: Some Empirical Evidence," *Accounting Review* (January 1980): 22.

at fixed exchange rates.[11] Each currency was to be maintained within one-half of one percent of its official rate by the intervention of the government banks of the member countries. After extensive devaluations against the dollar in 1949, this policy was successfully followed until 1967. The official rates were occasionally adjusted as a result of pressures caused by trade imbalances. But the system itself — characterized as a system of adjustable pegs — remained intact.

In a period of fixed exchange rates, it does not matter which of the translation methods under study is used. They give identical results. There are no translation gains or losses. Examination of financial statements translated from one major currency to another prior to 1967 is of relatively little interest.

The time interval of importance begins in 1967, the year of the first major change in the exchange rate of the pound against the dollar since 1949, and extends through December 31, 1978.

The appropriate time for beginning to translate financial statements involves a more delicate question than the question of the beginning of the period of interest. Translation methods which use historical rates require knowledge of the exchange rate over the prior lives of assets on hand at the beginning of that period. In an era of fluctuating exchange rates, the translation computations may need to begin many years before the beginning of the period of interest to produce results of acceptable accuracy.

Fortunately, the long interval of fixed exchange rates eases the problem of initiating the computations. The assumption that all assets on hand at December 31, 1966, are to be translated at the exchange rate in effect at that date (assuming, of course, that historical rates translation is appropriate) involves minor errors for the currencies studied. There is almost no error for translation into pounds of assets acquired after 1949. There is no error for translation into deutsch marks of assets acquired after March 1961, and only a 5 percent error (due to a 5 percent revaluation of the deutsch mark) for assets acquired from 1950 to March 1961. This period of stability eliminates the start-up problems that must be faced in the computation of general price-level–adjusted financial statements from historical cost data, and results in relatively uniform accuracy of the translation algorithms over the entire interval from 1967 to 1978.

The translation process was thus begun at December 31, 1966. All

[11] A concise review of the history of the international monetary system in the postwar period may be found in R. (Rapporteour) Soloman, *The International Monetary System* (Boulder, Col.: Atlantic Council of the United States/Westview Press, 1977).

assets on hand at that time were assumed to be of December 31, 1966, vintage. Each translation method produced the same translated balance sheet at the date. Subsequent differences are due entirely to events beginning in 1967.

**Currencies**

Practical limitations dictated that only two currencies be used for translation examples in this paper. The pound was chosen as a currency which rather steadily depreciated against the dollar during the time interval of the study, and the deutsch mark as a currency which consistently appreciated.

The currencies chosen were those of major trading partners of the United States. The United Kingdom and the Federal Republic of Germany had internal rates of inflation that were in the normal range by international standards. The appreciation of the dollar against one currency and its depreciation against the other help to clarify the range of effects of different translation methods.[12]

The use of other currencies would not seem to impact significantly the conclusions of this article.[13]

**Companies**

All companies satisfying certain criteria were examined. The translated financial statements are intended to represent the results of translation in the relatively pure situation of a single exchange environment, identifiable industry, and long-term exchange rate trend. They are not intended to represent directly the results of translation in multiple currency environments, for firms with multiple lines of business, or for exchange environments with no trends, although they are intended to provide raw material upon which analysis of the results of translation in more complex situations can be based.

Four types of restrictions were imposed in selecting the companies to be studied. Restrictions were imposed because of data availability, to insure the dollar as the functional currency, to limit lines of business, and for technical programming reasons.

The data used for translation were those available on the Compustat primary-secondary-tertiary tapes in the spring of 1980. Certain properties of the companies selected were determined with the aid of the

[12] Significant drifts in rates over the period since 1967 are the rule rather than the exception, with many major currencies showing rather continuous appreciation and a few depreciations. This fact, if it is regarded as reflecting normal behavior, has implications for the CS method of treating translation gains.

[13] The basis for this belief and the degree of generalizability of the results of this paper will be examined later.

NAARS/Lexis System. Thus, the companies studied were limited to the intersection of these two data sets.

The translation program required sixteen pieces of financial information for each company for each fiscal year from 1966 to 1978. No missing data were allowed for thirteen of the sixteen. As many as three years of missing data were allowed for capital expenditures, the current portion of long-term debt, and the method of inventory costing. Interpolations of capital expenditures and the current portion of long-term debt were made in place of missing data. Missing data for the principal method of inventory costing were provided by manual interpolation during the preparation of an inventory method card for each company. This card specified the costing method to be used by the translation program for each year of the run.[14]

The restrictions to insure the dollar as the functional currency were taken in part through instructions issued to the NAARS/Lexis System. No company was selected if its 1978 financial statements contained footnote disclosure of an involvement with foreign exchange. In addition, no company was selected if its 1978 line of business disclosures referred to export business or mentioned any of thirty plausible trading partners or geographic regions. Companies meeting these criteria were manually checked against the list of multinational companies used by Dukes in his study of the market reaction to SFAS 8.[15] Companies common to the two lists were discarded.

Several methods were used to restrict the lines of business of companies in the study. First, SIC codes allowed in the NAARS list were restricted. The SIC code was required to be less than 600, and only transportation companies were included among those companies with SIC codes from 400 to 499. Second, the SIC codes obtained from NAARS were checked against the SIC codes listed in the Compustat Index, and companies with codes that were not consistent between the two sources were discarded. Third, companies which were recognized as having financial subsidiaries were eliminated.

The major technical restriction on companies used in the study was that they all have fiscal years ending December 31. Companies which changed from LIFO to another inventory valuation method were also

[14] Toleration of missing data was one of a number of compromises made in the interest of computing the translated statements of a reasonably large number of companies. The principal compromise was in the use of Compustat data and automated selection procedures rather than detailed case-by-case analysis of financial statement or 10-K reports. The rationale for this will be discussed later.

[15] Dukes, *Investigation of the Effects of SFAS 8.*

eliminated to simplify the translation process and to avoid errors arising from inconsistencies in the Compustat data for such companies. Companies which used standard costing of inventories, companies which had financial data suggesting major investments, and companies which ever had, either in translated or untranslated form, negative common equity were eliminated. Inclusion of such companies would have interfered with the accuracy of translation and with the interpretation of statistical measures of the impact of translation.

## ANALYSIS OF TRANSLATION

### General Analysis

Translated income may be separated into income translated transaction by transaction and a translation gain or loss. The translation gain or loss may be resolved in turn into a holding gain, an asset exchange gain, and a gain from capital transactions. The holding gain arises from the use of different translation rates for beginning and end-of-period account balances. The asset exchange gain arises from the exchange of assets with account balances translated at one set of rates for assets with account balances translated at a different set of rates. The gain on capital transactions arises from transactions in which the change in the equity account is translated at one rate while the changes in the corresponding asset accounts are translated at other rates. An example of a holding gain is the gain on net monetary assets that arises from the use of the MN method of translation. An example of an asset exchange gain is that which results from the reclassification of long-term to short-term debt when using the CN method of translation. An example of a gain on capital transactions is the gain that arises from a dividend of nonmonetary assets when using the MN method of translation.

The transition from exact mathematical analysis to a practicable translation program utilizing available information involves a number of approximations. A broad guiding principle is to keep these elements of translated income which may be expected, on average, to be material. The use of this principle retains the problem of translating a real financial statement within manageable bounds.

All translation methods examined in this paper use market exchange rates for translation. For methods of this type, there is an extremely useful distinction between current rate accounts — those with balances always translated at the current exchange rate — and historical rates accounts — those with balances translated at weighted average of rates in effect prior to the date of the financial statements. Specialization of

translation methods using market exchange rates produces, without any approximations, considerable simplification of translated income. Income translated transaction by transaction reduces to income translated at the average rate, corrected for revenue and expense items for which average rate translation is inappropriate. The holding gain becomes simply the gain on the net position in assets translated at the current rate.

The asset exchange gain and the gain on capital transactions are not much simplified by the use of market exchange rates. The authors believe, however, that only one of these gains is likely to be important in income translated by any of the five methods in this paper. This exceptional case is the gain that arises from reclassification of long-term debt to current liability status when the CN method is used. This reclassification involves a switch from historical rates to current rate translation and produces gains comparable in average magnitude to CN method holding gains. All other asset exchange and capital transaction gains are neglected.

The only other approximation that is not method dependent is the assumption that transactions occur uniformly throughout the year. With this assumption, income translated transaction by transaction is

$$e = \bar{\sigma}\eta + \sum_{i_h}\sum_{j_r} (\sigma[i_h, j_r] - \bar{\sigma})\,\delta\alpha_{i_h, j_r}. \qquad (1)$$

The first term in this expression is income translated at the average rate. The second term is a correction arising from revenue and expense items which should not be translated at the average rate. The average translation rate for the accounting period is $\bar{\sigma}$, $\eta$ is untranslated income, $\delta\alpha_{i_h, j_r}$ is the change in historical rate account $i_h$ produced by revenue or expense transaction $j_r$, and $\sigma(i_h, j_r)$ is the historical translation rate appropriate to that transaction in that account. The sum is for all revenue and expense transactions involving historical rate accounts. The holding gain is

$$g_1 = (\sigma - \sigma')\alpha'_c + (\sigma - \bar{\sigma})(\alpha_c - \alpha'_c) \qquad (2)$$

The rate at the balance sheet date is $\sigma$, $\sigma'$ is the rate at the immediately preceding balance sheet date, $\bar{\sigma}$ is the average rate, $\alpha_c$ is the net current rate account asset balance at the balance sheet date, and $\alpha'_c$ is the net current rate account balance at the immediately preceding balance sheet date. The first term in the holding gain is simply the gain on the beginning net current rate account position, while the second term is a gain on changes in the net current rate account position during the year. The only translation effect examined in this paper that does

not arise from these two basic formulas is the gain from reclassification of debt using the CN method.

**Method-Specific Approximations**

No additional approximations are required for translation at the current rate. Income translated transaction by transaction is simply income translated at the average rate,

$$e = \bar{\sigma}\eta \tag{3}$$

The translation gain is the gain on net assets,

$$g = (\sigma - \sigma')\alpha' + (\sigma - \bar{\sigma})(\alpha - \alpha'). \tag{4}$$

In the CS method, the translation gain is an adjustment to translated owner's equity. The translation formulas are the same as for the current rate method, but the income measure is e, rather than e + g. As will be seen later, this view produces CS method-translated income that is quite different from CR method-translated income.

The CN method uses historical rates to translate noncurrent assets. This leads to the reclassification gain described previously and to corrections to income translated at the average rate arising from the conversion of historical rates' asset accounts into expenses. The only one of these conversions expected to have a significant effect on translated income is the conversion of plant to depreciation expense. Thus, CN method income translated transaction by transaction is approximately

$$e = \bar{\sigma}\eta + \delta D, \tag{5}$$

where $\delta D$ is the depreciation adjustment,

$$\delta D = \textstyle\sum_{j_r} (\sigma[pl, j_r] - \bar{\sigma})\,\delta\alpha_{pl, j_r} \tag{6}$$

The holding gain is

$$g_1 = (\sigma - \sigma')\alpha'_k + (\sigma - \bar{\sigma})(\alpha_k - \alpha'_k) \tag{7}$$

The change in plant asset account $\alpha_{pl}$ arising from revenue transaction $j_r$ is $\delta\alpha_{pl, j_r}$. The translation rate appropriate for this transaction is $\sigma(pl, j_r)$. The sum is for all revenue transactions. The first term in (7) is the gain on beginning working capital, while the second term is a gain on changes in working capital during the period. The gain on asset exchanges results entirely from reclassification for long-term liabilities and is given by

$$g_2 = \sum_{j_x} (\sigma[ltd, j_x] - \bar{\sigma})\,\delta\alpha_{ltd, j_x} \tag{8}$$

The sum is for all reclassification transactions; $\sigma(ltd, j_x)$ is the historical

rate at which long-term debt reclassification in transaction $j_x$ was originally carried, and $\delta\alpha_{ltd,\, j_x}$ is the amount of debt reclassified in transaction $j_x$.

Using the MN method, nonmonetary assets are translated at historical rates. The holding gain is therefore a gain on net monetary assets Consumption of nonmonetary current assets produces corrections to income translated at the average rate. The only significant effect arises from translation of inventory and cost of goods sold at historical rates. Income translated transaction by transaction is approximately

$$e = \bar{\sigma}\eta + \delta D + \delta I. \tag{9}$$

The depreciation adjustment defined in (6) is $\delta D$, and $\delta I$ is the inventory adjustment,

$$\delta I = \sum_{j_r} (\sigma[\text{ivty}, j_r] - \bar{\sigma})\, \delta\alpha_{\text{ivty},\, j_r} \tag{10}$$

Once again, the sum is for revenue transactions. The rate appropriate for translating transaction $j_r$ involving inventory account $\alpha_{\text{ivty}}$ is $\sigma(\text{ivty}, j_r)$. The change in the account balance resulting from the transaction is $\delta\alpha_{\text{ivty},\, j_r}$. The translation gain is

$$g = (\sigma - \sigma')\alpha'_m + (\sigma - \bar{\sigma})(\alpha_m - \alpha'_m) \tag{11}$$

where $\alpha_m$ is the net monetary asset position at the balance sheet date, and $\alpha'_m$ is the net monetary asset position at the immediately preceding balance sheet date.

The MI method does not have an inventory adjustment to income translated transaction by transaction. Thus, income translated transaction by transaction is as given by (5) for the CN method. The translation gain is

$$g = (\sigma - \sigma')(\alpha'_m + \iota') + (\sigma - \bar{\sigma})(\alpha_m + \iota) - (\alpha'_m + \iota') \tag{12}$$

Inventory is $\iota$ at the balance sheet date and $\iota'$ at the immediately preceding balance sheet date. The other notation is the same as for the MN method.

## TRANSLATION PROGRAM

### Operation

Because of limitations on data availability, certain additional approximations are necessary and are described here. Operating income is the income total translated. In part, this is because operating income is the measure upon which other authors focus. In part, it is because the translation of extraordinary items using historical rates method is made unreliable by uncertainties in the aging of the accounts.

Computation of income translated at the average rate is trivial and is common to every method of translation. Monthly exchange rates were extracted from *International Financial Statistics* of the International Monetary Fund. The average rate used for this computation was the average of monthly rates for the year in question.

Computation of the depreciation adjustment required by those methods which translate net plant at historical rates required several approximations. Gross plant was layered using the gross plant and capital expenditure accounts. This was the method used by Parker[16] for the preparation of general price-level–adjustment financial statements from Compustat data. If capital expenditures were greater than the gain in gross plant, the difference was assumed to represent plant disposals during the period. Because capital expenditures reported by Compustat do not include additions to gross plant that result from acquisitions or mergers, it sometimes happened that the gain in gross plant was greater than reported capital expenditures. Without adjustment, this anomaly leads to negative plant disposals. This situation has been discussed by Thies and Revsine.[17] When it occurred, the integrity of the computation was restored using a technique developed for Compustat-based general price-level adjustment by Baran, Lakonishok, and Ofer.[18] Disposals were set equal to zero and capital expenditures were redefined as the gain in gross plant.

Net plant, gross plant, and depreciation expense were translated at the same rate. The error involved in this procedure was investiagted by Parker and found to be moderate.[19]

The inventory adjustment is used only by the MN method. The procedure applies to any combination of switches among FIFO, average, and LIFO cost flow except changes from LIFO. Companies which changed from LIFO were not included in the sample.

The cost of goods manufactured or purchased was first determined from the Compustat data by adjusting the cost of goods sold for changes in inventory. The translation rate used for the cost of goods manufactured or purchased was the average translation rate for the year. Inventory was layered according to the cost flow assumption used by the company for the year of translation. The translation rate for the new inventory layer, using FIFO or LIFO costing, was the translation

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[16] James Parker, "Impact of Price Level Accounting," *Accounting Review, 52* (1977): 69.

[17] J. Thies and L. Revsine, "Capital Expenditure Data for Inflation Accounting Studies," *Accounting Review, 52* (1977): 216.

[18] Baran, Lakonishok, and Ofer, "Information Content," p. 22.

[19] Parker, "Price Level Accounting," p. 69.

rate in effect at the mean production month of that layer (assuming uniform production). The translation rate for the new inventory layer under average costing was the weighted average translation rate for goods available for sale.

Computation of the reclassification gain required knowledge of the amount of long-term debt reclassified as current, as well as the term of that debt. The current portion of long-term debt is reported by Compustat, but the reported numbers are deficient due to failure to restate retroactively financial statements after acquisitions and mergers. This problem is analogous to the capital expenditure problem discussed earlier, and the treatment was the same. If the decrease in long-term debt exceeded the reported current portion, the current portion was redefined as the amount of the decrease. This was, in a sense, a minimal consistent replacement; it assumed that no new long-term debt was added to the balance sheet in the immediately prior period. This redefinition also provided a consistent interpolation for the current portion of long-term debt in missing data cases— not infrequent for this data item in the early part of the time interval studied.

Long-term debt was layered using a FIFO flow rule. The translation rate for long-term debt was constructed using for each layer the average rate for the year in which the layer was created. The reclassification gain was computed by taking the current portion as the amount of debt reclassified. The translation rate just before reclassification was determined using a FIFO flow rule.

The translation gain using the MN method is the holding gain on net monetary assets. Computation of this holding gain is a familiar task, since it is required for the construction of general price-level–adjusted financial statements. The fundamental problem in computing this gain from Compustat data is that the data classification scheme used by Compustat reports neither explicitly nor implicitly the net monetary asset position of a company. This significant difficulty impedes using Compustat data for precise computation of holding gains for individual companies; this has been noted elsewhere.[20]

Examination of the raw data for the companies used in this study suggests, however, that the inability to distinguish monetary from nonmonetary assets in the Compustat asset categories may not be very important in a statistical sense. Assets which were not classified as monetary or nonmonetary typically represented less than 20 percent of total assets. The unclassified assets reported by Compustat for the companies in this study typically are not more important on the balance

[20] Ibid.

sheet than deferred taxes and preferred stock, over which there is genuine theoretical argument as to appropriate classification in the monetary/nonmonetary scheme.

The program classified all current assets except inventory as monetary. All other assets were classified as nonmonetary. All current liabilities were classified as monetary, as was long-term debt. Other noncurrent liabilities and deferred taxes were classified as nonmonetary. The MI method was treated as the MN method. The translation gain was computed from equation (12). The CR and CS method translation gain is the holding gain on net assets. This was computed directly from equation (4) with no additional approximations.

Translated common equity is the only balance sheet item used in the statistical analysis of this paper. In principle, the translation rate for common equity is the weighted average of translation rates determined for each asset and liability category. In practice, the available data did not permit determination of a translation rate for each asset and liability category. Method by method, translation rates for most major asset categories were determined in the process of translating income. Two additional historical rates were used. Intangibles and deferred taxes were relatively important on the balance sheets of the companies considered in this paper, although their amortizations were relatively unimportant — certainly less important than depreciation expense and the cost of goods sold — in the determination of operating income. A historical translation rate for each of these items was therefore computed.

Intangibles were layered using a FIFO flow assumption. The change in intangibles in a period was added as a new layer if positive, or removed from the oldest layer if negative. Each layer was translated at the average rate for the year the layer was added. The translation rate for intangibles was computed as the weighted average of translation rates for the intangible layers.

Deferred taxes were layered, and the translation rate for deferred taxes was constructed in exactly the same way as for intangibles. This method is not consistent with the rules for the amortization of deferred taxes, but it provides consistent treatment of additions to the deferred tax account. For the companies in this study, additions were the dominant changes in the account. The method thus captured the major effect of the use of historical rates for the translation of deferred taxes.

Using translation rates for assets computed as a by-product of the computation of translated income and the rates computed for intangibles and deferred taxes as described earlier, common equity was translated for each of the methods under study except the CS method.

Common equity under this method includes the cumulative effect of holding gains on net assets and was computed in the data analysis phase of the study.

#### Rationale

Limitations imposed because of the restricted data available from the Compustat tapes led to approximations in the translation program that might have been avoided through the use of other more direct sources of financial data but would have required more resources than were available. Arguments have been advanced by a number of writers, however, that Compustat-based general price-level–adjusted computations are sufficiently reliable to provide a basis for statistical studies of the impact of general price-level–adjusted financial statements.[21] Because the present study uses a computation program that is as sophisticated as those of the published general price-level–adjustment studies and takes advantage of the fixed exchange rate regime prior to 1967 (an advantage unavailable for general price-level–adjustment computations) these arguments apply, *a forteriori,* to the translated financial data.

### STATISTICAL RESULTS

#### Introduction

The average common equity of companies studied was $65.9 million in 1966 and $134.7 million in 1978. The extremes were $0.5 million and $1,826.3 million in 1966 and $1.5 and $2,269.5 million in 1978.

The method of selection for the companies studied was expected to produce under-representation of both large and small companies: small companies because those studied were included in the Compustat data base, large companies because they have a greater probability of significant international business involvement. The kurtosis of the sample distribution of common equity was consistent with this expectation for every year examined. The selected companies were more homogenous in size than companies in the economy as a whole.

[21] See for example, Baran, Lakonishok, and Ofer, "Information Content," for arguments and a review of earlier work. Additional information on the reliability of Compustat GPL-adjusted statements indicates that supplementary price-level adjusted disclosures are required of large companies. For a preliminary analysis that is consistent with the position taken here, see Harold Wyman and J. Edward Ketz, "Validity of Estimated General Price Level Adjustments," *Proceedings of the Southeast Regional Meeting of the American Accounting Association* (1981), p. 390.

Attention in this paper is focused on the ratio of translated income to average translated common equity.[22] In the interest of brevity, this will be characterized as return on equity (ROE). The numerator is translated operating income plus the appropriate translation gain, and the denominator is the average of beginning and ending translated common equity.

**Return on Equity**

Statistics on average ROE are reported in exhibit 1. ROE for each translation method and each currency was averaged over the 160 companies and twelve years of the study. The average ROE before translation was .118. Translation into deutsch marks resulted in average ROE that ranged from .013 for the CN method to .118 for the CS method.

Translation into pounds resulted in minimum average ROE of .118 for the CS method and maximum average ROE of .171 for the CN method.

That average ROE is lower for the deutsch mark and higher for the pound after translation is not surprising. The deutsch mark was a stronger currency and the pound a weaker currency than the dollar. This result is, in effect, a correction for different inflation rates in the three currencies.

What is surprising is the magnitude of the differences resulting from different *methods* of translation. The null hypothesis "ROE produced by method i is the same as ROE produced by method j in year k and currency l" was tested. The t-values resulting from this test are shown

**Exhibit 1. Average ROE by Method and Currency (Ranks in Parentheses)**

| Method | Deutsch marks | Pounds |
|---|---|---|
| Untranslated | .118 (1-2) | .118 (5-6) |
| Current standard | .118 (1-2) | .118 (5-6) |
| Monetary plus inventory | .089 (4) | .133 (3) |
| Monetary/Nonmonetary | .093 (3) | .132 (4) |
| Current rate | .052 (5) | .145 (2) |
| Current/Noncurrent | .013 (6) | .171 (1) |

[22] Both ROE and its natural logarithm were considered for examination. ROE was selected because it had more nearly normally distributed populations in most of the cases analyzed.

by currency and year in exhibit 2.[23] Currency years in which the hypothesis can be rejected at the .01 level are starred.

The CN and MN methods each produced returns on equity that differed from those of all other methods in at least nineteen of twenty-four currency years. The MI method differed from all but the CS method in at least twenty-one currency years, but differed from the CS method in only eleven currency years. The CR method differed from the CS method in all twenty-four currency years.

Three of these results deserve some comment.

Although the MN and MI methods are conceptually similar and differ only in their treatment of the inventory account, they produce significantly different ROE in tweny-one of twenty-four currency years. Despite the fact that the MI and CS methods are quite different in concept, they give rather similar operational results. ROE was more often than not indistinguishable at the .01 level. Although CR and CS method returns on equity differed in all twenty-four currency years, this result has limited practical importance. The inclusion of translation gains and losses as adjustments to owner's equity in the CS method makes the two methods equivalent in disclosure.

#### ROE Variability

ROE variability was estimated by computing the standard deviation of ROE for each company over twelve years, separately for each currency and each method of translation. The results are shown in exhibit 3.

For both currencies, variability is least using the CS method and greatest using the CN method. CN method ROE variability approaches twice that of untranslated ROE.

The CS method is exceptional in producing ROE variability that is equal, to two significant digits, to untranslated ROE variability. This is because the CS method produces translated ROE that is nearly the same as untranslated ROE, since income and equity are translated at approximately equal rates.

The ordering of methods by ROE variability in exhibit 3 does not agree exactly for the two currencies of translation. The MN method shows second greatest variability for translation into pounds, but third greatest for translation into deutsch marks. The CR method shows the reverse. However, the hypothesis that ROE variability produced by

[23] Hypothesis rejection was decided using the student's t-test, a test which assumes normally distributed populations. The actual populations were somewhat skewed and were shorter tailed than normal. This fact, while it moderately affects the levels of significance, has no qualitative impact on the conclusions.

**Exhibit 2. T-Values for the Hypothesis that Translation Methods Produce Returns on Equity that Do Not Differ**

| Method pair | | Cur. | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cur/NonC | vs | DM | 4.1* | 2.4 | 4.9* | 3.1* | 5.0* | 3.1* | 4.8* | 6.1* | 5.7* | 5.8* | 6.1* | 5.3* |
| Mon/NonM | | Pd | 4.6* | 0.5 | 1.1 | 4.5* | 5.1* | 5.3* | 6.9* | 6.9* | 5.8* | 5.5* | 5.5* | 6.0* |
| Cur/NonC | vs | DM | 4.0* | 2.0 | 4.7* | 4.5* | 4.9* | 3.7* | 5.2* | 5.4* | 5.0* | 5.6* | 5.7* | 5.3* |
| Mon-Invt | | Pd | 4.3* | 4.5* | 0.8 | 4.4* | 4.9* | 5.0* | 5.9* | 3.9* | 5.6* | 5.7* | 5.4* | 6.2* |
| Cur/NonC | vs | DM | 0.4 | 1.1 | 2.9* | 4.9* | 2.1 | 3.9* | 1.1 | 3.4* | 4.6* | 3.6* | 4.7* | 4.0* |
| Cur rate | | Pd | 3.0* | 5.1* | 4.4* | 5.0* | 3.4* | 2.9* | 1.8 | 3.9* | 2.3 | 0.8 | 4.3* | 3.9* |
| Cur/NonC | vs | DM | 4.9* | 1.6 | 6.0* | 5.5* | 6.6* | 4.7* | 6.4* | 6.0* | 2.0 | 6.3* | 6.6* | 5.9* |
| Curr std. | | Pd | 4.6* | 5.0* | 4.0* | 5.1* | 6.2* | 6.4* | 5.7* | 1.3 | 6.6* | 6.7* | 6.8* | 7.8* |
| Mon/NonM | vs | DM | 2.2 | 3.8* | 3.5* | 4.2* | 3.4* | 3.8* | 0.2 | 6.7* | 6.3* | 4.8* | 6.0* | 3.4* |
| Mon-Invt | | Pd | 3.9* | 6.2* | 6.3* | 2.7* | 4.0* | 4.6* | 5.0* | 8.4* | 4.7* | 3.2* | 4.7* | 3.2* |
| Mon/NonM | vs | DM | 3.9* | 5.7* | 4.3* | 1.4 | 4.3* | 1.3 | 4.0* | 5.6* | 5.3* | 5.3* | 5.6* | 5.5* |
| Cur rate | | Pd | 4.2* | 4.6* | 4.6* | 4.1* | 4.4* | 4.6* | 6.9* | 5.9* | 5.1* | 4.7* | 5.3* | 5.3* |
| Mon/NonM | vs | DM | 2.5 | 5.2* | 3.2* | 5.7* | 2.8* | 6.2* | 0.5 | 3.6* | 5.0* | 3.0* | 2.1 | 0.2 |
| Curr std. | | Pd | 3.1* | 5.9* | 4.5* | 4.7* | 3.5* | 3.5* | 3.8* | 6.3* | 3.7* | 2.4 | 4.2* | 3.6* |
| Mon-Invt | vs | DM | 3.9* | 3.7* | 4.1* | 3.3* | 4.1* | 2.8* | 4.3* | 4.8* | 4.8* | 4.9* | 5.1* | 5.4* |
| Cur rate | | Pd | 3.9* | 0.5 | 4.2* | 4.1* | 4.2* | 4.4* | 5.6* | 4.7* | 4.8* | 4.8* | 5.1* | 5.3* |
| Mon-Invt | vs | DM | 1.7 | 2.8* | 2.2 | 2.7* | 1.8 | 3.9* | 0.4 | 1.6 | 3.6* | 1.7 | 2.5 | 2.8* |
| Curr std. | | Pd | 1.4 | 3.5* | 4.0* | 4.6* | 2.6 | 2.0 | 1.4 | 3.7* | 1.2 | 0.1 | 3.0* | 2.9* |
| Cur rate | vs | DM | 4.3* | 5.3* | 4.6* | 4.6* | 4.8* | 4.8* | 5.0* | 5.3* | 5.3* | 5.5* | 6.1* | 6.3* |
| Curr std. | | Pd | 4.3* | 4.4* | 4.6* | 4.7* | 4.8* | 5.0* | 5.5* | 5.2* | 5.3* | 5.4* | 6.0* | 6.4* |

* Indicates rejection at the .01 level.
DM = deutch mark.
Pd = pound.

**Exhibit 3. Standard Deviation of ROE by Method and Currency**

| (Rank in parentheses) Method | Deutsch mark | Pound |
|---|---|---|
| Current standard | .071 (5-6) | .071 (5-6) |
| Untranslated | .071 (5-6) | .071 (5-6) |
| Monetary-Inventory | .074 (4) | .122 (3-4) |
| Monetary/Nonmonetary | .078 (3) | .131 (2) |
| Current rate | .103 (2) | .122 (3-4) |
| Current/Noncurrent | .119 (1) | .138 (1) |

the MN and CR methods is the same cannot be rejected at the .01 level.

If significance of numerical differences at the .01 level is demanded, the MI and CS methods produce less variability for the deutsch mark than does the MN method, which produces less variability than the CR and CN methods. This ordering holds in the sense that every *pair* of ROE variabilities separated by a "less" may be distinguished at the .01 level, while the others may not be. The MI method thus produces ROE variability not significantly different from that produced by the CS method. The MN method is distinguishable, but the magnitude of the difference is moderate. The CR and CN methods show substantially different earnings variability, but this difference is not significant at the .01 level.

For translation into pounds, the CN, MN, MI, and CR methods produce a substantial increase in ROE variability. MI and CR method variability is about 70 percent greater than the untranslated variability, while CN method translation nearly doubles ROE variability.

For the pound, the rule that the CS method produces less variability than the MI method, which produces less variability than the MN and CR methods, which produce less variability than the CN method, holds in the sense described earlier for the deutsch mark rule. If the .01 level of significance is required for hypothesis rejection, the results for the pound and the deutsch mark are *not* consistent. There is partial ordering of methods consistent with the results for both currencies in the sense that it implies no rank order hypothesis for pairs of methods that can be rejected at the .01 level. That partial ordering is the following: CS produces less variability than MI, which produces less variability than MN, which produces less variability than CR, which produces less variability than CN.

Despite consistency in rank ordering of methods, the results for the pound are in practical terms rather than different from those of the

deutsch mark. The MI and MN methods show variabilities that are pushed into the general range of those shown by the CR and CN methods. Detailed examination of the components of translated income shows that this is due to a difference in the history of exchange rate variations for the two currencies. While the dollar depreciated rather consistently against the deutsch mark through the twelve-year interval of investigation, its appreciation against the pound halted in 1976 and was followed by a significant decline in 1977-78. For most companies, the depreciation adjustment and translation gain of the MN and MI methods produce opposite effects on ROE during a period of long-term trend in the exchange rate. But during a sudden reversal *after* a long-term trend, the depreciation adjustment and the translation gain act in concert to enhance the variability induced in ROE by the change in exchange rates. This phenomenon does not occur if translation is by the CR method because there is no depreciation adjustment; it does not occur for the CN method because the sign of the translation gain is reversed. Thus, the variability of translated ROE for the MN and MI methods is brought closer to the variability for the CR and CN methods when the pound is the currency of translation.

As a last observation, note that the MI method produced less ROE variability than the MN method, despite the exposure of inventory to exchange rate risk. This is a reflection of the fact that normal practice for companies with significant inventory is to operate from a significant net monetary liability position.

#### The CS Adjustment to Owner's Equity

From the perspective of management, the CS method has some potentially attractive features. It produces ROE that is predictably nearly the same as untranslated ROE and therefore independent of exchange rate fluctuations. Precisely because this ROE does not depend upon exchange rate fluctuations, it has the same variability as untranslated ROE. The CS method also consistently reports the greatest ROE of the five methods studied when the country of overseas operations has a currency depreciating relative to the dollar on a predictably continuous basis.

The reason for these features is that the holding gain on net assets is not included in income. Of course, the CS method does not allow this gain to go unreported. It is incorporated directly into owner's equity. The analyst will thus have information available under the CS method that is equivalent to the information provided by the CR method.

The accumulated holding gain on net assets is included in a valuation account similar to the account used for marketable equity securities.

But the holding loss on a portfolio of marketable equity securities has a simple and direct economic interpretation. It is the decline in market value of these securities since their purchase. The accumulated holding gain account preposed by the CS method has no such advantage. It is the "gain" on a collection of historical cost accounts translated at current rates. It is neither economically meaningful nor consistent with the conventional U.S. accounting model.

The absence of interpretation for the accumulated holding gain would not be a serious flaw if its impact on the balance sheet as a whole turned out to be small. The CS method is, after all, one of the simplest translation methods in terms of computation and record keeping. It is worthwhile to examine the accumulated holding gains under the CS method on the balance sheets of the selected companies. Exhibit 4 presents the ratio of the accumulated holding gain to average equity by year and currency for the selected companies. Because of the fixed exchange rates in prior periods, the accumulated holding gain starts at zero in 1966 for both currencies.

The holding gain for the deutsch mark climbs steadily, with a brief reversal in 1975, to an average value of −.800 in 1978. The range is from −.443 to −1.196. The holding gain (which is, of course, a loss) reduces translated common equity in 1978 by an average of 44 percent, ranging from 31 percent to 55 percent for different companies.

The holding gain for the pound follows a more erratic course reflecting the movement of the exchange rate. After peaking at an average of .366 in 1976, it falls to an average of .141 in 1978, ranging from .001 to .424 for different companies. The accumulated gain in 1978

**Exhibit 4. Ratio of the Accumulated CS Method Holding Gain to Average Equity by Year and Currency**

| Year | Deutsch mark | Pound |
|---|---|---|
| 1966 | .000 | .000 |
| 1967 | .006 | .160 |
| 1968 | .005 | .138 |
| 1969 | −.081 | .116 |
| 1970 | −.090 | .114 |
| 1971 | −.210 | .051 |
| 1972 | −.227 | .134 |
| 1973 | −.392 | .132 |
| 1974 | −.533 | .110 |
| 1975 | −.418 | .248 |
| 1976 | −.501 | .366 |
| 1977 | −.632 | .209 |
| 1978 | −.800 | .141 |

thus increases translated common equity by an average of 16 percent, ranging from 0.1 percent to 74 percent.

The accumulated holding gain is a large fraction on common equity, and it is variable among companies. These two factors, combined with the absence of a direct interpretation, may impose a burden on the users of financial statements and raise questions about adoption of the CS method in SFAS 52.

#### Summary

In this brief examination of the statistical properties of translated earnings, several things have been determined. The translation method is significant for ROE, even averaged over a twelve-year period. Differences among methods are large and significant. The MN and MI methods, similar in concept, produce significantly different ROE. The MI and CR methods, quite different in concept, produce similar though distinguishable ROE. The accumulated holding gain included in owner's equity by the CS method is large in relative terms and represents a substantial portion of owner's equity at the twelfth year after beginning (because of the fixed rates of exchange before 1967) at zero. It has no simple economic interpretation and does not fit smoothly into the conventional accounting model.

The translation method affects ROE variability. The overall results order the CS method as producing smallest variability, followed by the MI method, the MN method, the CR method, and the CN method in exactly that order. There is relatively little difference in the variability produced by the MN and MI methods, and by the CR and CN methods.

The direction of currency movement is important in the choice of translation method, because different methods report significantly different ROE, and the sign of these differences reverses when the direction of currency movement reverses.[24]

### GENERALIZABILITY

The program used for translation was applied to only two currencies over a particular twelve-year interval. These currencies were chosen in

[24] The analysis reported in this section was also conducted by industry group and individual industry. For the restricted sample of industries considered, the search for industry effects was largely negative. Although the *magnitudes* of translation effects were industry dependent, the *ordering* of translation methods was insensitive to industry. The details are reported in Jon R. Nance, "Consequences of Foreign Currency Translation Methods: An Industry Comparison," *Proceedings of the Midwest Regional Meeting of the American Accounting Association* (1982), p. 219.

part because of exchange rate behavior over that interval: the deutsch mark rose steadily against the dollar, while the pound declined steadily until 1976, reversing this behavior on the strength (according to many observers) of British interest in North Sea oil. A comment is appropriate concerning the degree to which the reported results on ROE and ROE variability may be generalized to other currencies.

The results for ROE depend primarily upon the drift rate of the exchange rate involved in translation. Relatively long-term drifts in the exchange rates of the currencies of major trading nations have been commonplace in the floating rate period. This phenomenon may plausibly be traced to consistent national differences in expansionary/inflationary monetary policies. For example, such differences have existed between Switzerland and Germany on the one hand, and the United States and Britain on the other. These long-term drifts imply that the effect of translation method on ROE will be important in many exchange environments.

On the other hand, there are exchange rates for which the long-term drift has been much less significant. Until recently, the exchange rate between the U.S. and Canadian dollars has shown little drift, despite an interval of float much longer than that of other major currencies. For such rates, the impact of translation method on income is of relatively minor importance.

The results for ROE variability depend primarily on the volatility of exchange rates. There is substantial evidence that, in the floating rate period, the volatilities of the exchange rates of major trading currencies have been similar. Levich showed that in the period 1973-75, the standard errors of weekly percentage changes in the exchange rates of eight major trading currencies with the U.S. dollar range from 0.8 percent for the pound to 1.7 percent for the Swiss franc, with most values in the 1.3-1.6 percent range.[25] This relative currency independence of exchange rate volatility suggests a relative currency independence of the results on the effect of translation method on ROE variability reported in this paper.

## CONCLUSIONS

The analysis has shown that significant differences in the translated financial statement of foreign subsidiaries follow from the use of different translation methods. These differences, if current consolidation policies are maintained, become the ingredients of complex and subtle

[25] Richard Levich, *The International Money Market: An Assessment of Forecasting Techniques and Market Efficiency* (Greenwich, Conn.: JAI Press, 1979).

properties of the consolidated financial statements of multinational enterprises engaged in multiple lines of business and operating in multiple currency environments. The hypothetical results of one method of translation will not normally be available to users of financial statements if another method was utilized in their preparation. Although certain editorial comments attended the examination of translated financial data in this paper, no normative criteria are introduced here. Therefore, no policy recommendation can be made as a result of this study.

This study shows, however, that the method of translation is significant in the preparation of financial statements of multinational enterprises and provides considerable information as to its significance. The interested parties, users and preparers of financial statements, must combine these results with their own interests and determine how strongly they should lobby, and what they should be willing to sacrifice to promote the adoption of a translation method which they find desirable.

## ADDITIONAL REFERENCE

R. Eskew. "The Forecasting Ability of Accounting Risk Measures: Some Additional Evidence." *Accounting Review* (January 1979): 107.

# *The Multiple Earnings Announcements of Non–U.S. Multinational Enterprises—Implications of Observed Patterns*

GARY MEEK*

Substantial documentation exists regarding the many differences in accounting principles and reporting practices of companies throughout the world. One can, for example, refer to publications by Price Waterhouse International,[1] the American Institute of Certified Public Accountants,[2] and a number of individual authors (for example, Zeff[3]) for evidence of existing differences. Fundamentally, these variations result from differing economic, social, and political environments found in the countries around the world. Choi and Mueller[4] assert a number of environmental circumstances such as the type of economy involved, legal system, pattern of business ownership and size of business firms, relative stability of the currency unit, and general levels of education, which, in their opinion, directly affect accounting development. Accounting must be responsive and sensitive to its environment if it is to be a socially relevant discipline. Thus, heterogeneity in accounting practices around the world is to be expected, given that the environmental circumstances vary.

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[1] Price Waterhouse International, *A Survey in 46 Countries: Accounting Principles and Reporting Practices* (London: Price Waterhouse International, 1975).

[2] American Institute of Certified Public Accountants, *Professional Accounting in 30 Countries* (New York: AICPA, 1975).

[3] Steven A. Zeff, *Forging Accounting Principles in Five Countries: A History and an Analysis of Trends* (Champaign, Ill.: Stipes Publishing Company, 1971).

[4] Frederick D. S. Choi and Gerhard G. Mueller, *An Introduction to Multinational Accounting* (Englewood Cliffs, N.J.: Prentice-Hall, 1978), pp. 23-28.

To the extent that countries are similar along environmental dimensions, however, perhaps some similarities of accounting practices also exist. Such a relationship is posited by Mueller, Seidler and others.[5] Frank empirically supports the hypothesis that the cultural and economic environment in a country influences its accounting principles and reporting practices.[6] Moreover, he finds a close association between groupings (clusterings) of countries by accounting practices and groupings by environmental factors. By applying statistical procedures to the accounting and reporting practices surveyed in Price Waterhouse International's *A Survey in 38 Countries,* Frank finds that four clusterings (or accounting prototypes) emerge: (1) the British Commonwealth, (2) Latin America, (3) Continental Europe, and (4) the United States. Then by independently grouping the same countries along selected environmental characteristics, he consistently groups the countries in 83 percent of the cases.[7] Thus, it seems that while wide disparities in financial accounting practices and reporting exist worldwide, some discernible groupings do emerge upon closer analysis.

As long as the corporation supplying financial information and the investor using the information are from the same country (or perhaps "reporting environment"), financial reporting problems remain much less complicated than when information and investor come from different countries. A company domiciled in one country must report its results of operations to investors in another country; however, new "transnational financial reporting" issues arise. For the company, the basic problem is one of conveying to a "foreign" reader the same message that a native reader receives; the "problem" arises because readers' educations, cultures, and experiences vary worldwide. An increasing number of companies must contend with the problem as more and more seek capital on a global basis. For the user, the problem is one of adapting to the variety of financial reporting practices that exist around the world and of interpreting the specific message received from the "foreign" corporation. As investors increasingly diversify their portfolios

[5] Gerhard G. Mueller, "Accounting Principles Generally Accepted in the United States versus Those Generally Accepted Elsewhere," *International Journal of Accounting* (Spring 1968): 91-103; L. J. Seidler, "International Accounting — The Ultimate Theory Course," *Accounting Review* (October 1967): 775-81.

[6] Werner G. Frank, "An Empirical Analysis of International Accounting Principles," *Journal of Accounting Research* (Autumn 1979): 593-605.

[7] The proposition that countries of the world can be clustered by their accounting principles is also empirically supported in Richard C. DaCosta, Jacques C. Bourgeois, and William M. Lawson, "A Classification of International Financial Accounting Practices," *International Journal of Accounting* (Spring 1978): 73-85. The article suggests several factors, some of them environmental in nature, which underlie financial accounting practices.

of securities internationally, more and more of them face the problem. Thus, both corporations, as suppliers of financial information, and readers, as users of such information, face a task when dealing with their "foreign" counterparts.

To date, the bulk of the research on transnational financial reporting has dealt with the subject from the perspective of the corporation, and more specifically, with the annual report to shareholders. For example, Bedford and Gautier document differences in the content and structure of annual reports of companies from the European Economic Community, Switzerland, and the United States.[8] Barrett analyzes annual report disclosure of companies from seven industrialized countries, and finds variations in the level of disclosure across countries, as well as a general improvement in the extent and quality of disclosure over the time period studied.[9]

Choi and Mueller classify six approaches that the world's multinationals take in reporting, through annual reports, to audiences in other than the home country.[10] Corporations "accommodate" their foreign readership by one or more of the following forms:

1. *No accommodation to foreign readers.* Financial statements, prepared according to local accounting principles, retain the native language and currency. This approach assumes a general applicability and usefulness in other countries, and leaves it to the reader to interpret the report. This is the prevalent practice of companies domiciled in the United States and in France.
2. *Convenience translations.* Financial statements are still prepared using local accounting principles, but the text portions are translated into another language. Monetary units are not translated. In a sense, this approach assumes that to "read" something familiar is better than nothing at all, but it still does little to accommodate the foreign reader. German and Swiss companies often adopt this approach.
3. *Convenience statements.* These are convenience translations taken one step further. Here, the monetary amounts are translated as well (usually by applying the year-end foreign exchange rate to all amounts in the financial statements), so that both the text and monetary amounts

[8] Norton M. Bedford and Jacques P. Gautier, "An International Analytical Comparison of the Structure and Content of Annual Reports in the European Economic Community, Switzerland, and the United States," *International Journal of Accounting* (Spring 1974): 1-44.

[9] M. Edgar Barrett, "Financial Reporting Practices: Disclosure and Comprehensiveness in an International Setting," *Journal of Accounting Research* (Spring 1976): 10-26.

[10] Choi and Mueller, *Multinational Accounting,* pp. 112-19.

are familiar to the audience of interest. Several possibilities for misunderstanding which seem less likely with the previous two, however, are associated with this approach: (1) the fact that home generally accepted accounting principles (GAAP) are used is obscured and (2) the fact that different auditing standards may have been observed and, hence, the inherent reliability of the financial statements may not be what the user expects. Convenience statements are issued by some European and Japanese companies.

4. *Disclosure of impacts of differences in accounting principles.* For the particular audience of interest, the financial statements include a special footnote or supplementary schedule reconciling net income (and sometimes asset and liability accounts) on the basis of the generally accepted accounting principles of the home country to a net income amount based on the accounting principles of the country of the audience of interest. This is the minimum requirement for reporting to the U.S. Securities and Exchange Commission (SEC) by non–U.S. companies in their 20-K reports. Also, the Dutch Philips Company routinely includes this disclosure in its annual report.

5. *Multiple reporting.* "Primary" financial statements are prepared for local audiences in the native language and using local accounting principles. "Secondary" financial statements are also prepared for audiences in other countries, the characteristics of which include (a) the text material in the language of the "other country"; (b) the GAAP and disclosure criteria from the "other country"; and (c) the monetary amounts expressed in the currency of the "other country" (as in convenience statements). Essentially, this approach requires a company to keep more than one "set of books." It is also the recommendation of the Accountants International Study Group.[11] It is typical for today's large Japanese multinationals.

6. *World standards.* Here the company attempts to transcend national reporting differences by synthesizing the practices around the world. The financial statements may or may not be consistent with the recommendations of the International Accounting Standards Committee. This approach is quite rare. In the absence of prescribed worldwide standards, comparability across firms is by no means assured, since each company selects what in its own management's opinion represents the "best" of the practices in the world. Sometimes these financial statements will be appended to the local set, but they may actually be the primary financial statements. The statements of the Swiss CIBA-

[11] Accountants International Study Group, *International Financial Reporting* (Toronto: AISG, 1975).

GEIGY Ltd. illustrate the former, while those of the Dutch/U.K. Royal Dutch/Shell illustrate the latter.

While the annual report is certainly an important source of information for judging corporate profitability, it is not, presumably, the only source used by the financial community. Corporations communicate financial information in other ways. For example, the annual earnings announcement published in financial newspapers typically precedes the dissemination of the annual report by several weeks. As a more timely source of information, the earnings announcement is likely to be important to users of financial information, too. And some empirical evidence suggests that this is often the case. Beaver documents responses of U.S. security market participants to the annual earnings announcements by U.S. companies.[12] Forsgårdh and Hertzen find that the Stockholm market reacts to earnings announcements of Swedish firms,[13] and Deakin and Smith find reactions to the earnings announcements of South African companies on the Johannesburg exchange.[14] Thus, the earnings announcement that corporations make to their *home country audience* has been studied, at least to some extent. What has not been studied regarding multinational enterprises, however, is how they publicly report their results (if at all) to audiences in *other* countries, other than through the annual report medium. Differential access to this public announcement could give investors in some parts of the world a potential advantage over others in trading on this information. Therefore, knowing what some multinationals do in this regard would seem to be of interest to investors, as well as to other multinationals. For the purposes of this study, the perspective of a U.S. investor in the equity securities of non–U.S. firms is chosen. Thus, the analysis focuses on how selected non–U.S. multinational enterprises (MNEs) publicly announce annual operating results to a U.S. audience, in terms of the timing relative to the home announcement, as well as the accounting principles used to measure the results. Essentially, this extends what we know about how MNEs accommodate their foreign readership in the annual report by studying how they accommodate a foreign audience in the annual earnings announcement.

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[12] William H. Beaver, "The Information Content of Annual Earnings Announcements," Empirical Research in Accounting: Selected Studies, Supplement to Vol. 6, *Journal of Accounting Research* (1968): 87-92.

[13] L. Forsgårdh and K. Hertzen, "The Adjustment of Stock Prices to New Earnings Information," in *International Capital Markets*, ed. E. J. Elton and M. J. Gruber (Amsterdam: North-Holland, 1975), pp. 68-86.

[14] Edward B. Deakin and Charles H. Smith, "The Impact of Earnings Information on Selected Foreign Securities Markets," *Journal of International Business Studies* (Fall 1978): 43-50.

The U.S. investor also has another potential source of information concerning the annual earnings number of foreign MNEs, and that is the annual filing with the Securities and Exchange Commission (Form 20-K), required of non-North American MNEs with shares listed on a U.S. stock exchange, and which have assets exceeding $1 million and more than 500 shareholders.[15] What is particularly interesting about the 20-K is the following SEC requirement:

> Every issuer filing a report on this form shall file as a part of its report the financial statements, schedules and accountants' certificate which would be required to be filed if the report were filed on Form 10-K. Any material variation in accounting principles or practices from the form and content of financial statements prescribed in Regulation S-X shall be disclosed and, to the extent practicable, the effect of each such variation given.[16]

Thus, apart from any accommodation the MNE may give the U.S. investor in the annual report, the corporation is required to explain and quantify in the 20-K the effects of differences between using the GAAP of the home country and of the United States. For the U.S. investor, the 20-K may be the only place from which to obtain a net income number from a foreign corporation that is stated on the same basis as for a U.S. corporation. Comparability is often considered a desirable characteristic of financial information,[17] and so the 20-K is potentially valuable to a U.S. investor. Moreover, knowing how foreign MNEs comply with the aforementioned reporting obligation in the 20-K has implications regarding the SEC's enforcement policies and the potential usefulness of the 20-K for an investor.

The primary purpose of this paper is to document the reporting patterns that derive from three reporting events by selecting non-U.S. multinational enterprises. The three events are (1) the annual earnings announcement that the companies make in their respective home countries, (2) the annual earnings announcement that the companies make in the United States, and (3) the annual Form 20-K filing that the companies must make with the U.S. Securities and Exchange Commission. The documentation emphasizes the *timing* of the three report-

[15] Reporting requirements for foreign issuers under the Securities Exchange Act are discussed in Arne Hovdesven, "Applicability of the Registration and Reporting Requirements of the Securities Exchange Act to Foreign Issuers," contained in *Sixth Annual Institute on Securities Regulation*, ed. Robert H. Mundheim et al. (New York: Practicing Law Institute, 1975); and in Timothy Tomlinson, "Federal Regulation of Secondary Trading in Foreign Securities," *Business Lawyer* (January 1977): 463-505.

[16] *Prentice-Hall Securities Regulation*, Vol. 3 (1978), paragraph 13,295.

[17] *Statement of Financial Accounting Concepts No. 2 — Qualitative Characteristics of Accounting Information*, reprinted in the *Journal of Accountancy* (August 1980): 105-20, specifically discusses comparability in paragraphs 111-19.

ing events relative to one another, and the *accounting principles* used to measure the earnings so reported. Thus, this paper seeks to extend what is already known regarding transnational financial reporting by examining reporting communications other than the annual report — communications whose content has heretofore gone unstudied and which are potentially valuable sources of information for U.S. investors.

## DATA GATHERING

### The Companies

It was decided initially to limit the investigation to non–U.S. firms whose shares are traded on the New York or American Stock Exchanges. The criterion was imposed primarily to keep the data collection effort within what *a priori* was felt to be a reasonable bound. It is not clear how this limitation biases the results. The firms considered are more likely to be the largest of the world's multinationals, and they may have more experience in dealing with transnational financial reporting problems. Being traded on the two major U.S. exchanges enhances their visibility to the U.S. investment community, and, thus, these firms may be the ones in which U.S. investors are most interested.

Foreign firms traded on the New York Stock Exchange were identified by referring to the annual editions of *The New York Stock Exchange Fact Book* from 1968 through 1978. Foreign firms traded on the American Stock Exchange were identified via correspondence with AMEX. Additionally, various editions of Standard and Poor's *Register* and Standard and Poor's *Daily Stock Price Record* were consulted to determine any other companies that escaped detection.

The following additional criteria and considerations reduced the final list of companies to twenty-six from five countries:

1. A country's GAAP and disclosure practices should potentially differ from those of the United States. This study intends to focus on how firms with potentially unfamiliar reporting accommodate the U.S. investor. If the reporting standards in a company's country of domicile are similar to those in the United States, it would not be possible to determine whether or not the company is actually accommodating the U.S. audience.
2. The company should be incorporated *and* domiciled in the same "home" country. (Sometimes companies incorporate in another country to take advantage of tax shelter arrangements.) It was felt that the lack of a clear national identity for a company's GAAP and disclosure practices could confound the results.

3. If data collection problems were encountered in securing the dates of the home country earnings announcements in a country, the firms in this country were eliminated out of necessity.

Exhibit 1 presents the list of companies included in the study.

**Exhibit 1. Companies Included in the Study**

Israel
- Alliance Tire and Rubber Co., Ltd.
- American Israeli Paper Mills Ltd.
- Etz Lavud Ltd.

Japan
- Honda Motor Co., Ltd.
- Kubota, Ltd.
- Matsushita Electric Industrial Co., Ltd.
- Pioneer Electronic Corp.
- Sony Corp.

Netherlands
- KLM Royal Dutch Airlines
- Royal Dutch Petroleum Co.
- Unilever N.V.

Philippines
- Atlas Consolidated Mining and Development Corp.
- Benguet Consolidated, Inc.
- Marinduque Mining & Industrial Corp.
- Philippine Long Distance Telephone Co.
- San Carlos Milling Co., Inc.

United Kingdom
- B.A.T. Industries Ltd.
- British Petroleum Co., Ltd.
- Courtalds Ltd.
- Dunlop Holdings, Ltd.
- EMI, Ltd.
- Imperial Chemical Industries, Ltd.
- The Imperial Group, Ltd.
- Plessey Co., Ltd.
- "Shell" Transport and Trading Co., Ltd.
- Unilever, Ltd.

### The Dates and Contents of the Reporting Events

The time period studied includes fiscal years 1968 through 1978. During this period of time, interest in transnational investing intensfied, and the difficulties of transnational financial reporting gained wider attention. The time period also seems sufficiently long to secure data points.

The following describes the procedures used to secure the dates and

contents of the three reporting events during the time period studied.[18] The dates (as well as contents) of the "home country" annual earnings announcements for companies domiciled in Israel, Japan, the Netherlands, and the Philippines were secured for the author by knowledgeable individuals in these countries.[19] The sources of the "home" announcements were determined by these individuals and are as follows:

1. Israel — release filed with the Tel-Aviv Stock Exchange;
2. Japan — press release published in *Nippon Keizai Shimbum* (*Japan Economic Newspaper*);
3. Netherlands — press release published in *Het Financieel Dagblad* (*Financial Daily*); and
4. Philippines — press release published in various Philippine financial newspapers.

The dates of the U.S. companies' announcements in the United Kingdom were gathered from the *Financial Times* (London).[20] Additionally, letters were sent to each company in the study asking for the same information. The companies' responses were then used to cross check the information so gathered. The U.S. earnings announcement dates were taken from the *Wall Street Journal Index* and verified by reference to the specific issue of the *Wall Street Journal.* The announcement dates represent the first public disclosure by the companies of their annual earnings in the home countries and in the United States. Altogether, 200 home, and corresponding U.S., earnings announcement dates and contents were secured.

The *dates* of the 20-K filings were secured from two sources. The SEC stamps a "Date Received" on the cover page of each filing, which represents the first date that the public can review the filing in the public reference room of the SEC in Washington, D.C. Disclosure, Inc., a private company that sells copies of various SEC documents on file

[18] Because there is a lag between a company's fiscal year end and when it announces earnings or files its 20-K, the dates cover *calendar* years 1968 through early 1979.

[19] These individuals were the following:

a. Israel — Professor Baruch Lev, Dean of the Graduate School of Business Administration, Tel-Aviv University;

b. Japan — Professor Kazuo Hiramatsu, faculty member at Kwansei Gakuin University, Osaka;

c. Netherlands — Dr. Leon van den Boom, former visiting scholar in accounting, University of Washington; and

d. Philippines — Mr. E. R. Reyes, partner with SGV & Co., Manilla.

[20] Copies of the *Financial Times* for announcements during calendar years 1968 through 1972 were examined at the Guildhall Public Library, London, and for years 1973 through 1979, at the University of Washington.

in Washington, D.C., began copying 20-K filings on a regular basis in 1975/1976.[21] These copies were examined at the J. Hugh Jackson Library of Business, Stanford University. In addition, several more 20-K filing dates were secured by ordering cover pages directly from Disclosure. The *contents* of the 20-Ks examined at the Stanford library were also noted. The contents of several additional 20-Ks were available via *Corporate Investors Research Library,* which reprints the 10-Ks and 20-Ks of New York Stock Exchange companies. (Unfortunately, the filing dates are not shown.) Through these procedures, the author secured the dates (only) for sixteen 20-Ks, the contents (only) for thirteen, and the dates *and* contents for seventy-six.

## THE FINDINGS

This section describes the reporting patterns that emerge, based on the observations secured by the foregoing procedures. The description emphasizes the *timing* of the three reporting events (home earnings announcement, U.S. earnings announcement, and filing of Form 20-K with the SEC) relative to one another, and the *accounting principles* used to measure the earnings so reported.

First, with the exception of the Japanese companies, all companies report their earnings in both the home country and the United States using the generally accepted accounting principles of the home country. In some cases, however, these earnings are also consistent with U.S. GAAP, a point which is discussed later.

The Japanese companies are unique in their pattern of earnings reporting. Approximately three months prior to the close of the fiscal period, corporate officials release a "forecast" of the earnings for the period. The "final" earnings amount, subject to formal approval by the shareholders, is announced about a month and a half to two months after the close of the fiscal period. Both the forecast and final earnings are measured using Japanese GAAP. Approximately one month later, the companies release earnings in the United States, based on *U.S.* GAAP. (Recently, two of the companies — Pioneer and Sony — have been making their final earnings announcement concurrently in Japan and in the United States, the Japanese announcement based on Japanese GAAP, and the U.S. announcement based on U.S. GAAP.)

For the Netherlands and U.K. companies, the home and U.S. earnings announcements are concurrent. For the Israeli companies, the home announcements average one to two weeks prior to the U.S. announcement. For the Philippine companies, no clear pattern emerges —

[21] A conversation with an employee of Disclosure, Inc., revealed this.

one company releases concurrently, another company releases earnings at home one to two weeks prior to the U.S. announcement, while a third releases earnings in the Philipines a month and a half after it releases in the United States. Finally, one Philippine company does not release earnings in the United States at all.[22]

A pattern consistently noted for companies is the filing of the 20-K report just at the deadline, that is, six months after the end of the respective fiscal year.

There is no requirement by U.S. regulatory bodies that public releases of earnings in the United States be stated in conformity with U.S. GAAP. And, as previously noted, companies used their home accounting principles to report earnings in the United States (except for the Japanese). *In no case is this fact disclosed.*

Previously, it was stated that the SEC requires a reconciliation in the 20-K of differences between home and U.S. GAAP when such differences are material. Thus, one should be able to tell from examining the 20-K whether the accounting principles used are also consistent with U.S. GAAP; and if they are not, what net income would be using U.S. GAAP. The 20-Ks examined for the firms in this study fall into three groupings.

#### Group 1

The Japanese companies use U.S. accounting principles in preparing their financial statements in the 20-K.[23] (As previously noted, the U.S. earnings announcement is also stated in U.S. GAAP.) This is either explicitly stated in the footnotes and/or auditors' report, or is easily inferred from reading the accounting principles footnote. The accounting principles of the Shell Group Companies — Royal Dutch Petroleum Co. and "Shell" Transport and Trading — are also consistent with U.S. GAAP. In fact, their accounting practices conform to the requirements of the Netherlands, United Kingdom (home countries, respectively of the parents) and the United States.[24] For one Philippine company, the application of Philippine GAAP also conforms to U.S. GAAP. For this group, no new basis for measuring earn-

[22] It was not possible to define a reporting pattern for the fifth Philippine company since the source was not able to secure the home announcement dates of this firm. This does not imply, however, that the company does not announce earnings in the Philippines. It does announce in the United States.

[23] U.S. GAAP is also used to prepare their general-purpose annual reports to U.S. shareholders.

[24] The Companies' 1978 consolidated annual report states, "It has always been the aim to use a synthesis of accepted practices in at least the Netherlands, the United Kingdom, and the United States. . . ." (p. 36).

ings is introduced in the 20-K, and the previous, publicly announced earnings number is fully consistent with U.S. rules.

#### Group 2

In recent years, several of the U.K. companies and one Dutch company have begun providing footnote reconciliations in their 20-Ks, explaining and quantifying the effects of the differences between home and U.S. GAAP. (The basic financial statements are still prepared according to home GAAP.) Generally, the auditors' opinion also notes that the financial statements are prepared using home GAAP, and a reference is made to the reconciliation footnote. (In earlier years, some of these same companies provided no such reconciliation, thus *not* complying with the SEC rule.) One U.K. company and one Israeli company provide a footnote wherein the differences are discussed, but not quantified in every case. Finally, one Philippine firm uses U.S. GAAP for its 20-K, but home GAAP for both its previous, publicly announced earnings figure and its annual report to shareholders. These firms constitute a second group. All at least discuss the differences between home and U.S. GAAP, and many also quantify the impact of the differences. Interestingly, the only place where one can find a discussion of these differences is in the 20-K; in no case does the annual report to shareholders (even the "U.S. version") provide this information.

#### Group 3

For the remaining firms, deciding the degree of conformity with U.S. GAAP is difficult. No mention is made in the 20-K of any differences between home and U.S. GAAP, but one *cannot* necessarily conclude from this that either (1) the principles used conform to U.S. GAAP (as well as home GAAP), or (2) while they do not conform to U.S. GAAP, the impacts of noncompliance are immaterial.[25] Sometimes reading the Accounting Policies footnote reveals no *apparent* inconsistencies with U.S. GAAP. At other times some inconsistencies with U.S. GAAP are noted (such as noncompliance with FASB *Statement No. 8*), but the materiality of the effect is not disclosed. These firms, then, make up a third group, which may be referred to as "ambiguous."

Exhibit 2 summarizes the classification of the eighty-nine 20-Ks which were examined.

In summary, the findings are as follows. First, the Japanese companies constitute a unique group. They make two announcements at home — a forecast prior to the fiscal year end and a final, after year

[25] A conversation with Carl T. Bodolus, chief of the SEC's office of International Corporate Finance, revealed this.

**Exhibit 2. 20-K Groupings**

| | Number of 20-Ks | Number of companies represented* |
|---|---|---|
| Group 1 | 38 | 9 |
| Group 2 | 24 | 8 |
| Group 3 | 27 | 11 |
| | 89 | |

* A company can be represented more than once if, for example, its 20-K for one year is included in Group 3, but its 20-K for a later year is in Group 2. There are six such companies. Additionally, four of the firms are not required by the SEC to submit Form 20-K.

end. Both, quite naturally, are based on Japanese GAAP. A U.S. announcement follows, but based on U.S. accounting principles. The financial statements in the 20-K are prepared according to U.S. GAAP. Companies from other countries in this study announce earnings at home and in the United States on the basis of "home" accounting principles: most companies make these two announcements simultaneously. In the case of the Shell Group companies, the accounting practices, while conforming to home requirements, also conform to U.S. requirements. One Philippine company also fits this same pattern. For all of the remaining firms, however, it seems that a net income number based on home GAAP and one based on U.S. GAAP are potentially very different. In the 20-K filing, the SEC does not require financial statements (and hence, a net income number) in conformity with U.S. GAAP; but it does require a reconciliation, as supplemental disclosure, when the accounting principles that are used to produce material differences from what would be produced under U.S. GAAP. Of course, companies may file financial statements in conformity with U.S. GAAP if they wish. Basically, those companies whose previous, publicly announced earnings amount is consistent with U.S. GAAP also prepare financial statements conforming to U.S. GAAP. (This is not too surprising since, if the accounting system produces a net income number consistent with U.S. GAAP — which may also be consistent with home GAAP — quite likely the financial statements produced will also be compatible with U.S. GAAP. A number of the remaining sets of firms do comply with the SEC requirement of supplemental disclosure of differences. The compliance is of recent origin, however, and in some cases, these same companies did not comply in earlier years. Other firms still do not comply.

## IMPLICATIONS AND DISCUSSION OF FINDINGS

What do these patterns imply? From what has been observed in this

study, it is not clear that firms go much beyond institutional requirements in discharging their reporting obligations. For example, the Japanese are odd in their type of reporting pattern. For some time, however, the SEC has required them to prepare U.S. GAAP financial statements in their 20-Ks, and it is interesting to note that the Japanese "SEC" also accepts the financial statements filed with the U.S. SEC, based on U.S. GAAP. It may very well be that the Japanese firms announce earnings in the United States based on U.S. GAAP because they know that they are going to compute a U.S. GAAP net income number anyway.

It was also noted that the Shell Companies use accounting principles acceptable in the United Kingdom, the Netherlands, and the United States. That the accounting principles are consistent with those of the two countries of domicile of the parents is not too surprising (this is also the case for the other bi-national group, the Unilever Companies). But considering that its 69 percent-owned subsidiary — Shell Oil Company — is a U.S. company, traded on the New York Stock Exchange, and (therefore) must abide by U.S. GAAP, it is not farfetched at all to expect that the Shell Group might want its accounting principles to conform to U.S. GAAP as well. (Shell Oil accounts for roughly one-eighth of the Group's total assets.) Since U.K. and Dutch companies are given more flexibility in selecting accounting principles than are U.S. companies, achieving conformity with the standards of these three countries is not necessarily that difficult. One other company (Philippine) was noted as having standards in conformity with home and U.S. requirements; this is not difficult for Philippine companies to accomplish, either.

Thus, several cases have been documented where companies announce earnings numbers in the United States consistent with U.S. accounting standards. In no case, however, is it clear that these companies have tried to accommodate their U.S. audience by using rules more familiar to them. In each case, it can be argued that this is a way to achieve multiple institutional requirements with one set of accounting measurement rules. In fact, of course, most of the companies surveyed announce their earnings amount in the United States based on home principles which are *inconsistent* with U.S. principles — in these public announcements, at least, no attempt is made to accommodate the U.S. audience. It is curious, too, that compliance with SEC reporting rules in filing Form 20-K is not uniformly observed. This may indicate that SEC enforcement procedures are lax, that companies do not take the requirements seriously, or both. It may imply an implicit acceptance by

the SEC of the quality of reporting by these large multinationals, however. Unfortunately for those investors desiring financial information stated on a basis comparable to U.S. firms, the potential usefulness of the 20-K is seemingly diminished.

The previous comments attempting to explain the patterns noted are, of course, conjecture at this point. More research is necessary before any of them can be stated with a degree of confidence. If the suggestion that companies discharge their transnational financial reporting obligations by responding to minimum institutional guidelines[26] is accurate, however, credence is lent to the idea that achieving worldwide uniform standards is best achieved in an institutional framework. Voluntary methods may not work.

One could argue that by releasing an earnings figure to the U.S. audience based on home GAAP, MNEs are at least providing a more timely piece of financial information (since it would presumably require extra time to generate a U.S.–based earnings number). Whether it is useful is another question, but it would seem that firms should at least identify that the earnings amounts published here are based on home country accounting rules; this is something that none of them does now.

Several cases are also documented where the home and U.S. earnings announcements are not concurrent; one firm does not announce in the United States at all. Differential access to this information conceivably gives securities market traders in certain parts of the world an advantage over traders in other parts. In general, this type of market "friction" may result in less efficient securities markets worldwide.

This paper has extended what we know about transnational financial reporting by examining, from the corporate perspective, certain financial reporting events that have heretofore not been studied. In a follow-up paper, the author will examine how users respond to these events, as evidenced by U.S. securities market reactions.

The worldwide diversity in financial reporting practices creates many of the reporting problems cited in this paper; a greater degree of compatibility would help solve them. The author supports the efforts of the International Accounting Standards Committee, and calls for more cooperation among the world's national accounting policy-making bodies.

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[26] With the 20-K filings, it is not clear that all companies even do this.

## BIBLIOGRAPHY


### Books

*AMEX Databook*. New York: American Stock Exchange, 1973.

Edwin J. Elton and Martin J. Gruber, eds. *International Capital Markets*. Amsterdam: North-Holland, 1975.

R. D. Fitzgerald, A. D. Stickler, and T. R. Watts, eds. *International Survey of Accounting Principles and Reporting Practices*. London: Price Waterhouse International, 1979.

*The New York Stock Exchange Fact Book*. New York: NYSE, June 1978.

### Articles

Edward B. Deakin, Gayles R. Norwood, and Charles R. Smith. "The Effect of Published Earnings Information on Tokyo Stock Exchange Trading." *International Journal of Accounting* (Fall 1974): 123-36.

Solomon Freeman. "International Minimum Disclosure and Procedural Rules." *Securities Regulation Law Journal* (Autumn 1977): 259-75.

Baruch Lev and Baruch Yahalomi. "The Effect of Corporate Financial Statements on the Israeli Stock Exchange." *Management International Review* (1972/2-3): 145-50.

Gerhard G. Mueller and Lauren M. Walker. "The Coming of Age of Transnational Financial Reporting." *Journal of Accountancy* (July 1976): 67-74.

### Other

American Stock Exchange. Correspondence, 12 December 1978, Janice Livingston, Research Associate.

Carl T. Bodolus. Securities and Exchange Commission, Washington, D.C. Correspondence, 3 August 1979.

*Corporate Investors Research Library*. New York: Wall Street Transscript.

*Daily Stock Price Record — American Stock Exchange* (formerly, *ISL Daily Stock Price Index*). New York: Standard & Poor's. Published quarterly.

*Daily Stock Price Record — New York Stock Exchange* (formerly, *ISL Daily Stock Price Index*). New York: Standard & Poor's. Published quarterly.

Disclosures, Inc. Bethesda, Md. Microfische copies of Forms 20-K filings with U.S. Securities and Exchange Commission.

Financial Accounting Standards Board. *Statement of Financial Accounting Concepts No. 2 — Qualitative Characteristics of Accounting Information*. Reprinted in *Journal of Accountancy* (August 1980): 105-20.

U.S. Securities and Exchange Commission. *Discussion Papers, SEC Major Issues Conference* (Washington, D.C.: January 13-15, 1975).

———. "Means of Improving Disclosure by Certain Private Issuers." *Federal Register* 41, no. 243, 16 December 1976, 13056.

———. "Foreign Private Issuers." *Federal Register* 42, no. 217, 10 November 1977, 58684-58670.

*Wall Street Journal* (Eastern Edition). New York: Dow Jones. Published daily except Saturdays, Sundays, and holidays.

*Wall Street Journal Index*. Princeton, N.J.: Dow Jones. Published monthly with annal cumulations.

# *An Overview of Rumanian Accounting*

MALCOLM M. McCLURE*

**INTRODUCTION**

The English-language literature on accounting in Eastern Europe shows an interesting imbalance. The USSR and Poland are frequently discussed by both Western and native authors. East Germany and Yugoslavia are discussed minimally, but a void exists for the rest of the Eastern Block countries. This lack of coverage is probably due to (1) a lack of training in the languages of Eastern Europe by English-speaking accounting theorists; (2) a lack of interest or opportunity on the part of Eastern European accountants to publish in English; (3) a lack of relevance of Eastern European economies to most Western economies; and (4) an assumed complete conformance of Eastern European accounting systems to the Soviet system. Three of the traditional textbooks on international accounting (Choi and Mueller, Arpan and Radebaugh, and Nobes and Parker[1]) ignore Eastern Europe. This seems an inexcusable lack of information on accounting systems covering a large and important part of the world's productive economies.

This paper presents a short overview of the current Rumanian accounting system according to Rumanian accounting textbooks. The view presented is purely synchronic — it examines only what the system is at the moment. It is necessary to establish a synchronic picture of a

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[1] Frederick D. S. Choi and Gerhard G. Mueller, *An Introduction to Multinational Accounting* (Englewood Cliffs, N.J.: Prentice-Hall, 1978); Idem, *International Accounting* (Englewood Cliffs, N.J.: Prentice-Hall, 1984); Jeffrey Arpan and Lee Radebaugh, *International Accounting and Multinational Enterprises* (Boston: Warren, Gorham & Lamont, 1981); and Christopher Nobes and Robert Parker, *Comparative International Accounting* (Homewood, Ill.: Irwin, 1981).

system before addressing the important questions of how the system arrived at its current state and what potentially change-producing pressures (both system internal and system external) bear on it.

The paper discusses the Rumanian accounting system in terms of (1) what types of organizations are required to account; (2) what types of organizations receive these reports; (3) what types of reports must be filed; (4) what the structure of the accounting function is; (5) what the theoretical basis of accounting is; and (6) what accounting methods are used.

## ORGANIZATIONS REQUIRED TO REPORT

As expected of a centrally controlled economy, all organizations must report to some higher unit:[2]

> ... in socialism all organizations, of all kinds: economic, scientific, cultural, political, etc., to the extent that they possess and manage material and monetary assets, are obliged to carry out accounting. Thus, all of these firms, institutions and organizations constitute accounting units.[3]

Enache notes that a planned economy cannot function without feedback.[4] Rusu states more specifically that "the regulation concerning reports and balance sheets of firms and of state economic organizations, cooperative organizations, and public activities provides for the preparation of the balance sheet quarterly and annually."[5] Interestingly, none of the available sources mentions accounting for privately owned enterprises, although such organizations are allowed to employ as many as six workers and must pay income taxes.

## ORGANIZATIONS RECEIVING THE REPORTS

Since the entire Rumanian economy amounts to one huge corporation (excepting small private enterprises), every employee has a superior to whom accounting reports must flow (as is generally true in managerial accounting). As Lanczos states:

> Accounting reports are prepared quarterly and annually, and monthly is prepared "the situation of the principal economico-financial indicators."
>
> Both the reports and the monthly "situation" are forwarded to the hierarchically superior organization (central headquarters, the minister, the re-

[2] Translations are as close to literal as possible without destroying intelligibility.
[3] Stefan Lanczos, *Elemente de contabilitate* [*Elements of Accounting*] (Cluj-Napoca: Editura Dacia, 1975), p. 22.
[4] Gheorghe Enache, *Bazele contabilității* [*The Bases of Accounting*] (Bucharest: Editura Stiintifică şi Enciclopedică, 1977), pp. 31-32.
[5] Dumitru Rusu, *Bazele contabilității* [*The Bases of Accounting*] (Bucharest: Editura Didactică şi Pedagogică, 1977).

gional director of the economy, etc.) to local financing banks, and to the regional director of statistics.[6]

In addition, the national bank, the investment bank, the agricultural bank, the State Committee for Planning, the Central Director of Statistics, and the workers (or their representatives) receive quarterly reports.[7]

Inventory shortage reports are considered quite a sensitive issue and must be approved at surprisingly high levels for relatively small amounts; for example, according to Lanczos,[8] the head of an enterprise can only approve amounts up to $25 while those over $750 must be approved by the vice-prime minister who coordinates the state committee for economics and local administration.[9]

### TYPES OF ACCOUNTING REPORTS

The principal accounting report is the balance sheet,[10] which is composed of the synthetic accounts — details are suppressed as in American accounting. An example is included as Appendix 2. The balance sheet (*bilant*) must be prepared quarterly. The balance sheet must be accompanied by appendices and an explanatory report. The appendices (*anex la bilant*) are listed here.[11]

*General forms* — common to branches and sub-branches
Distribution of benefits and coverage of planned losses;
Turnover tax and regularization tax;
Financing current assets;
Assets and sources of financing investments;
Amortization of fixed assets;
Capital repairs and diverse expenditures;
Non-economic expenditures (that is, losses); and
Material damages.

*Forms specific to branches of the industry*
Production of goods sold and purchased;
Benefits and losses (that is, the income statement; see Appendix 3);

[6] Lanczos, *Elemente,* p. 202.
[7] Ibid., p. 195.
[8] Ibid., p. 176.
[9] Rumanian lei are translated at 20 lei = $1, one of the official rates in the early 1970s. The free market rate was about 32 lei = $1 at the time.
[10] Lanczos, p. 196; and Constantin Staicu, et al., *Contabilitatea întreprinderilor comerciale* [*Accounting of Commercial Enterprises*] (Bucharest: Editura Didactică şi Pedagogică, 1977), p. 300.
[11] Lanczos, *Elemente,* p. 200.

Bank loans, enterprise funds (retained earnings), and redistributions;
Rate of turnover of current assets;
Lack of turnover of current assets subject to norms;
Analysis of current assets; and
Profitability of principal manufactured products.

Explanatory reports (*raporte explicative*) include completion of the financial plan, completion of the plan to introduce and extend new techniques, completion of the plan for financing investments, analysis of data contained in "the situation of calamities" report (corresponding roughly to insurable losses), and difficulties, failures, and predictions in connection with the completion of the plan. The income statement is relegated to the status of a balance sheet supplement, as in Soviet accounting.[12]

### STRUCTURE OF THE ACCOUNTING FUNCTION

Accounting is centralized on a national basis both as to the determination of accounting principles and the chain of command over accountants to a greater extent than in the European Economic Community, Poland, and the Soviet Union.[13] It is argued [14] that a set of uniform rules is necessary in a centralized economy and that there should thus be only one central rule-setting body (the Ministry of Finance). It is also claimed that centralization of authority over the chief accountant or controller (*contabil şef*) is preferable, although no explanation for such a position is presented. None of the material surveyed cites Simon et al.,[15] although that study provides reasonable support for the Rumanian system.

The chief accountant of a Rumanian enterprise is appointed by the organization directly superior to that enterprise. The chief accountant proposes personnel for his department, and the personnel are appointed by the management of the enterprise in which the department is located. The management of the enterprise has administrative control over the chief accountant, but control over accounting practices comes from outside the enterprise from the Ministry of Finance. The chief accountant, due to his responsibility for the enterprise's fiscal soundness, is given veto power over both financial and physical operations. The

[12] See Maureen Berry, "Accounting in Socialist Countries," in *International Accounting*, ed. H. Peter Holzer (New York: Harper and Row, 1984), pp. 409-52.
[13] See Maureen Berry, "The Accounting Function in Socialist Economies," *International Journal of Accounting* (Fall 1982).
[14] See Enache, *Bazele*, pp. 230-35 and Lanczos, *Elemente*, pp. 22-23.
[15] Herbert A. Simon, et al., *Centralization vs. Decentralization in Organizing the Controller's Department* (New York: Controllership Foundation, Inc., 1954).

enterprise's manager can appeal such a veto to the next higher level of management, the Ministry of Finance, or the concerned bank, depending on the circumstances.[16] This is a significantly higher level of responsibility than that placed on chief accountants in the Soviet Union, East Germany, or Poland,[17] although certain of the powers of the Soviet chief accountant resemble those of the Rumanian chief accountant.[18]

## THEORY OF ACCOUNTING

### Definition of Accounting and Information Systems

Various Rumanian authors give different definitions of accounting. Lanczos presents a statement which is more a characterization than a definition: "Accounting occupies itself with the following, mirroring, and control of phenomena and economic processes expressed in value."[19] Enache presents a number of definitions from other authors, but rejects them all as overly simplistic.[20] Among them are the following:

> Accounting is the science of recording the equalities of change in the capital of a person.[21]
>
> The science of accounting observes and studies movements of value caused by economic phenomena and of legal relationships (representing them numerically, quantitatively, and in values) through a process of specific calculations and establishes the result of these movements of values in a determined period of time.[22]
>
> The object of accounting comprises the value movement of materials in economic patterns, viewed according to economic efficiency and social dependence.[23]

These definitions are suitable for relatively mechanical operations, but they do not indicate the information-for-decision-making orientation of American textbooks. Lanczos and Enache both differentiate strongly between accounting (*contabilitatea*) and economic information systems (*sistem informational economic*) and give definitions similar to the American definition of accounting under information systems:

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[16] Lanczos, *Elemente,* p. 203.

[17] Berry, "Accounting Function."

[18] Nikolai Chumachenko and Norton M. Bedford, "Some Distinctive Aspects of Accounting in the USSR," *International Journal of Accounting* (Fall 1968): 32-33.

[19] Lanczos, *Elemente,* p. 19.

[20] Enache, *Bazele,* pp. 27-29.

[21] S. Iacobescu and A. Sorescu, *Curs de contabilitate comercială generală* [*Course of General Commercial Accounting*], vol. 2 (Bucharest, 1923), p. 11.

[22] D. Voina, *Contabilitate generală* [*General accounting*] (Brasov: Editura Academiei, 1947), p. 19.

[23] T. Tămăşan, *Bazele ştiintifice ale contabilitătii* [*The Scientific Bases of Accounting*] (Bucharest: Editura ştiintifică, 1973), p. 69.

In a broad sense, the concept of an *economic information system* combines into a whole the organized and correlated operations regarding the collection, preparation, analysis, preservation, and transmission of the economic information necessary for the guidance of socioeconomic processes, as well as the corresponding technical means, procedures, and methods of work involved.[24]

[An information system is understood as] the totality of procedures, methods and means used in the information process, considered as an assembly organized and integrated into an organic whole of operations of collection, transmission and preparation of data, as well as of systematicizing, analyzing, memorizing (depositing) and valuing of information.[25]

The principal objective of an information system is to aid the management of units in the regulation of economic activities.[26]

Teaciuc describes the place of accounting in an information system as follows:

As an integral part of the economic information systems, commercial accounting is called on to furnish management with information which permits it to react to disturbing endogenous or exogenous factors, to make certain decisions currently and with efficient perspective, and to control unfolding activities, so that these can be inscribed in the limits of the plan and of the program of work, on time and with the minimum of material, financial, and human resources.

He also discusses the responsibility of accounting for financial management and for safeguarding assets:

[To assure] . . . proper use of the technology and material assets entrusted to the administration of commercial units, to shorten the cash-inventory-cash cycle, to act to reduce current expenses and realize maximum revenues, using the proper organizational and management methods and procedures.[27]

#### Theoretical Basis of Accounting

Although socialist countries can be regarded as single conglomerate enterprises in which only internal reports would be needed, Rumanian accounting is dominated by the need for stewardship accounting which causes its accounting system to resemble external accounting in the United States. (Paraszczak,[28] however, states that control is the primary function of Soviet accounting.) Assets are entrusted to the enterprise[29] and must be strictly accounted for. Operating results are

[24] Enache, *Bazele*, p. 8.
[25] C. Purcarete, *Sistemul informational* [*The Information System*] (Bucharest: 1977), p. 17.
[26] Lazaris, *Elemente*, p. 17.
[27] Mihai Teaciuc, *Curs: Organizarea și conducerea contabilității în comerț și cooperație* [*Course: Organization and Conduct of Accounting in Commerce and Cooperation*] (Tipografia Universității din Timișoara, Timișoara, 1974), p. 4.
[28] John Paraszczak, "Accounting Soviet Style," *Management Accounting* (July 1978): 51-56.
[29] Enache, *Bazele*, p. 25.

much less important, and the profit and loss statement is merely an appendix to the balance sheet. Planning is highly important in a centralized economy, but it is barely mentioned in the Rumanian sources used, probably due to a strictly "top-down" budgeting system.

Since resources for the purchase of fixed assets come from the state, the state acquires an equity in the enterprise equal to the amount it invests in the asset. This equity is reduced by periodic charges to depreciation/amortization, as in Soviet accounting.[30]

Although Rumanian accounting is supposedly based on Marxism, and Marxism is based on the labor theory of value, only one of the sources studied even mentions the labor theory of value.[31] The author can see no evidence in the Rumanian approach to accounting where the labor theory of value had any effect on its accounting methods. Gorelik makes a similar observation regarding the Soviet accounting stem.[32]

As is the case with American accounting, Rumanian accounting is capable of dealing only with things expressed monetarily. "Not only economic operations, but also materials constitute accounting objects only in as far as they can be expressed in money."[33]

## ACCOUNTING METHODS

### Structure of the Enterprise

Lanczos divides the enterprise into three major parts (productive, administrative, and social or nonindustrial), each of which is then divided into several smaller parts.[34] The productive part is divided into basic, auxiliary, service, and other. All parts and subparts are considered to be overhead for accounting purposes except the "basic" area of production.

### Classes of Accounts

Like other European and Socialist accounting systems,[35] Rumanian accounting has ten major classes of accounts, which are divided into as many subaccounts as are necessary. Appendix 4 presents the accounts listed by the Central Union of Artisan Cooperatives (UCECOM).[36]

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[30] Berry, "Accounting in Socialist Countries," p. 444.
[31] Lanczos, *Elemente*, p. 15.
[32] George Gorelik, "Notes on the Development and Problems of Soviet Uniform Accounting," *International Journal of Accounting* (Fall 1973): 137-38.
[33] Enache, *Bazele*, p. 26.
[34] Lanczos, *Elemente*, pp. 27-28.
[35] Compare with Berry, "Accounting in Socialist Countries," p. 419.
[36] Uniunea centrală a cooperativelor meşteşugăreşti (UCECOM) [Central Union of Artisan Cooperatives], *Instrucţiuni de aplicare a planului de conturi pentru cooperatia meşteşugărească* [*Instructions for Application of the Plan of Accounts for the Artisan Cooperative*] (Bucharest: Revista de Contabilitate, 1972), p. 6.

The major classes are (1) fixed assets; (2) tangible circulating (current) assets; (3) monetary assets; (4) discounts (payables and receivables); (5) expenses; (6) revenues; (7) funds, reserves, financing, and results; (8) loans; (9) investments; and (0) accounts outside the balance (single-entry accounts such as leased assets). An account number ABC.DEF is identified as class A, group AB, synthetic account ABC, and analytic account ABC.DEF. Although this is the standard basic Socialist approach to the chart of accounts, the realization of the chart varies from country to country, as Berry observes.[37] The Rumanian chart of accounts, like the others, does not match any of the charts of accounts used by East Germany, Poland, Hungary, Cuba, or the USSR.

## FIXED ASSETS

### Classes of Fixed Assets

By law, fixed assets are defined as assets which have both a value over 500 lei ($25) and a life of more than one year. They are divided according to a 1968 law into nine classes which are amortized differently.[38] The classes are (1) buildings; (2) special constructions; (3) power equipment; (4) machines and equipment; (5) apparatus for measuring, control, and regulation; (6) means of transportation; (7) animals; (8) plants; and (9) small tools, accessories of production, and household inventory. This classification plan allows subjectivity of definition; for example, is the speedometer of a truck in class 5, or is it included as a part of the truck? To clarify this, the law defines an "object of inventory" as "an object meant to carry out a well-established function or a complex of objects destined to carry out, in its totality, a determined function."[39]

### Accounting for Fixed Assets[40]

The three principal processes affecting fixed assets are acquisition, depreciation (*amortizarea*), and transferring out or disposal. The accounting for these processes is essentially the same as in Soviet accounting in that not only is the asset depreciated, but also the equity account corresponding to it is amortized.[41] Following a single asset through this cycle, we have:

[37] Berry, "Accounting in Socialist Countries," pp. 417-19.
[38] Lanczos, *Elemente,* p. 30.
[39] Ibid., p. 31.
[40] Ibid., pp. 94-110.
[41] Berry, "Accounting in Socialist Countries," p. 444.

| | | |
|---|---|---|
| Acquisition | | |
| Fixed assets | 1,000,000 | |
| Fixed asset fund | | 1,000,000 |
| Depreciation (straight-line, recorded monthly) | | |
| Fixed asset fund | 10,000 | |
| Wear on fixed assets (*uzura*) | | 10,000 |
| Common expenses of the section | 10,000 | |
| Discount for amortization | | 10,000 |
| Disposal (after sixty months) | | |
| Fixed asset fund | 400,000 | |
| Wear on fixed assets | 600,000 | |
| Fixed assets | | 1,000,000 |

### Acquisition of Fixed Assets

When fixed assets are acquired new, they are entered according to the example just presented. When they are acquired used, their original cost and accumulated depreciation (wear) are recorded in their new owner's books exactly as they were in the books of their former owner. If new fixed assets are found, they are recorded as in the example. If old fixed assets disappear, they are recorded as if disposed.

Lanczos says that rented fixed assets are outside the double-entry system since there is no stewardship over them. He records their receipt by a debit to an account of group (0) and their return to their owner by a credit to that account.[42] The UCECOM similarly lists leased assets as a class (0) account (see Appendix 4). Rusu [43] records their receipt as

| | | |
|---|---|---|
| Fixed assets | 90,000 | |
| Lessors of fixed assets | | 90,000 |

This is a rather serious internal contradiction in a supposedly uniform system.

### Depreciation of Fixed Assets

Depreciation appears to be strictly straight line, although the sources studied do not specifically state this. (Gorelik states that only straight-line depreciation is allowed in Soviet accounting).[44] The period over which the asset is to be depreciated is determined by its class (out of the nine classes listed above). It is not specified whether a more precise analysis is possible.

[42] Lanczos, *Elemente*, p. 97.
[43] Rusu, *Bazele*, p. 123.
[44] Gorelik, "Soviet Uniform Accounting," pp. 144-45.

Depreciation is a cost of production. It is first charged to departments:

| | | |
|---|---|---|
| Common expenses of the section | 85,000 | |
| Expenses of auxiliary activities | 20,000 | |
| General expenses of the enterprise | 5,000 | |
| Discount for amortization | | 110,000 |

Subsequently, depreciation is allocated to the finished product (see Appendix 1b). Cash equal to the amount of depreciation must be remitted to the state fortnightly:

| | | |
|---|---|---|
| Discount for amortization | 55,000 | |
| Current account (cash in bank) | | 55,000 |

If a fixed asset is fully depreciated but continues to be used, depreciation is still charged to production at the same rate as before. The cash payment is distributed 60 percent to the central investment, 15 percent to the center of the industry, and 25 percent remains at the disposal of the enterprise.

#### Disposal of Fixed Assets

If an asset is fully used when it is disposed, but is not fully depreciated, the "fund for fixed assets" is credited for the unamortized book value. The unamortized book value is also debited to an unbalanced (class [0]) account "unamortized value of fixed assets retired ahead of time," which is amortized into product costs over time, by debiting "common expenses of the section" and crediting both the "discount for amortization" and the "unamortized value of fixed assets retired ahead of time."

According to Lanczos, renting assets produces no effect on the accounting system of the lesee since they still belong to the lessor enterprise.

### PRODUCTION AND SALES CYCLE

#### Materials

The cost of materials is defined as their delivered cost including transportation, purchasing (*aprovizionare*), and so on. Transportation, purchasing, and such are allocated by an average cost method at the end of the month to determine cost of sales.[45]

#### Payroll

Payroll[46] can be cross-classified in two different ways: (1) base pay

[45] Lanczos, *Elemente,* pp. 111-14.
[46] Ibid., pp. 115-24.

(pay for work) versus supplementary pay (pay for time not worked, that is, vacations and so on), and (2) direct wages versus indirect wages. Only base pay can be a direct wage. All indirect wages are charged to overhead and applied to products subsequently. The journal entries connected with the payroll cycle are presented in Appendix 1A.

**Overhead**

Overhead costs are collected in the accounts "common expenses of the section," "expenses of auxiliary activities," and general expenses of the enterprise."[47] Actual full costing is used for cost collection, while the finished goods are recorded at standard cost. Both Rusu and Lanczos discuss normal, standard, and direct costing at length.[48] Since Rumanian prices are controlled so there is no need to know overhead costs as a basis for pricing, and since a special report regarding the degree of fulfillment of plan must be filed annually, normal costing has no advantage over actual costing, while the emphasis on strict centralization and strong control tends to favor full costing over direct costing. Standard costing ties directly to the centralized budgeting process.

Overhead costs are allocated to product via allocation bases chosen as in U.S. cost accounting:

> The allocation of the expenses of sections to product can take place only on the basis of certain conventional calculations. For the effectuation of these conventional calculations the central problem is the choice of the basis of allocation. The basis of allocation is that element of the expenses in rapport with which the allocation of indirect expenses is carried out.
>
> The essential thing is that the choice of conventional procedures of allocation of indirect expenses should take into consideration criteria and bases of reporting which should insure the reduction of errors to the minimum, in the case of the identification of indirect expenses to units of product. These conditions are fulfilled if one keeps in mind the causal connection between the indirect expenses which must be allocated and the object (product, job, place, etc.) which has necessitated these expenses.[49]

Lanczos discusses only the direct method of overhead allocation. Although Rusu presents a diagram showing reciprocal services between auxiliary and annex sections,[50] he too discusses only the direct method of allocation.[51] Enache shows a stepwise method of allocation.[52] This probably represents a lack of complete standardization, allowing cost/

[47] Rusu, *Bazele,* p. 167, and Lanczos, *Elemente,* pp. 151-52.
[48] Rusu, *Bazele,* pp. 161-67, and Lanczos, *Elemente,* pp. 158-63.
[49] Lanczos, *Elemente,* p. 155.
[50] Rusu, *Bazele,* p. 168.
[51] Ibid., pp. 167-70.
[52] Enache, *Bazele,* p. 132.

benefit considerations to determine whether an enterprise uses a simple or complex system.

Although Lanczos included the social part of the enterprise as overhead in his introductory discussion[53] neither he nor Rusu mentions it in the sections dealing with overhead.

#### Finished Goods

Rusu shows a macro approach to the cost of finished goods. He lists the following elements of cost: direct materials, transportation in, purchasing, recoverable scrap (deduct), direct wages, expenses for maintenance of equipment, general expenses of the section, general expenses of the enterprise, and waste and reprocessing.[54] The journal entries collecting these costs are presented in Appendix 1B.

#### Sales and Profits

As in the Soviet accounting system,[55] two important stages are recognized in sales: when the goods are shipped and when payment is received from the customer. As soon as goods are shipped, the enterprise can borrow the cost of the goods from the bank.[56] Journal entries to record the selling and collection cycle are presented in Appendix 1C.

### MISCELLANEOUS

#### Balance Sheet

As Appendix 2 illustrates, a Rumanian balance sheet begins with the fixed assets at the top, as is standard in European accounting. As expected from the strong emphasis on stewardship, the Rumanian balance sheet is the central financial statement — the income statement is merely a supplement which helps to explain the change from one balance sheet to the next. Appendix 3 shows that the income statement is simply a statement of various categories of *net* revenues, rather than revenues and expenses. Rumanian accounting is very similar to the form advocated by some American accounting theorists where assets = equities. All accounts are closed at the end of a period, including the balance sheet accounts, again as is standard in European accounting.

#### Inventory Taking

Rumanian accounting considers an enterprise to have inventories not only of materials and goods for sale, but also of cash, equipment, buildings, receivables, payables, and so forth. All these items must be inven-

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[53] Lanczos, *Elemente,* pp. 27-28.
[54] Rusu, *Bazele,* pp. 152-54.
[55] See Berry, "Accounting in Socialist Countries," p. 440.
[56] Lanczos, *Elemente,* p. 132, and Enache, *Bazele,* p. 138.

toried several times a year, as well as at the end of the year. A Rumanian inventory process strongly resembles an American audit. As Lanczos puts it:

Inventory is the action of establishing factually, at a specific date, the existence and state of economic means, as well as the exact value of claims and obligations of an economic unit, organization or institution.[57]

Lanczos lists the following steps in conducting an inventory:

1. Prepare for the inventory. Sort the goods, check scales, plan who is to do what, prepare tags, check subsidiary accounts against analytic accounts, enter all entries in the books.
2. Conduct the inventory. Establish the existence, size, and condition of the things being inventoried. (Receivables and payables are to be confirmed.) All items are to be described on inventory sheets, signed by the members of the inventory commission and the manager. All items are to be valued by reference to the accounting records using historical cost and specific identification. Items for which cost is not recorded (forests, land, and so on) are recorded separately.
3. Compare the results of the inventory with the books:
   The inventory commission verifies the exactness of inventory items and registers in a report the conclusions, proposals and decisions reached. In the report they should also specify in detail the causes of shortages and losses, as well as those responsible for them, indicating at the same time the measures which have been or will be taken against the guilty persons.
4. Bring the books into agreement with the results of the inventory.[58]

Note the emphasis on placing blame in point 3. In discussing point 4, Lanczos states that offsets of over and short accounts are allowed only if the inventory items are so similar that they could easily be confused. Such emphasis on theft may be justified — in 1968, President Ceaușescu reported that 10 percent of the Rumanian gross national product was being stolen annually.

### Bookkeeping

Rumanian bookkeeping is similar to American practice. The journal (jurnal) is the book of original entry. Special journals are used: merchandising enterprises use ten and industrial enterprises thirteen different ones. Journals may be maintained in bound volumes, on loose pages, or in a mechanical system. Erasures are not allowed. Postings are made periodically from the journal to the accounts (*conturi*) in the ledger (*cartea-mare*), trial balances (*balante de verificare*) are taken, and a balance sheet and its annexes are prepared.

[57] Lanczos, *Elemente,* p. 170.
[58] Ibid., pp. 172-77.

## CONCLUSION

The Rumanian accounting system fits well with the nation's highly centralized, strongly controlled economy. The primary interest of managers must be upward defensive — explaining to their superiors what happened to every asset under their control — rather than outward offensive — trying to maximize the difference between the benefits produced and the resources consumed. The accounting system both contributes to that need and helps to satisfy it (by making possible strict control of subordinates).

Concerning the planning function of accounting, matters are less favorable. With the Rumanian accounting system's use of specific identification, historical cost, and straight-line depreciation, it seems unlikely that the macroeconomic aggregated figures the system is designed to generate will produce the accurate picture of the nation's economy needed for successful planning.

Studies of specific accounting systems such as the one described in this paper contribute to accounting theory in two ways. First, the question of whether different cultures require different accounting systems has been debated at length. Studies of the accounting systems actually in use in different cultures will provide evidence for use in structural comparisons to determine whether certain accounting structures actually do correspond to certain cultural features.

Second, descriptive studies of current systems are necessary as a beginning point to trace the evolution of those systems from their origins (typically imports of foreign accounting systems) to systems which accord better with their environment. The Rumanian system is particularly interesting in this respect since it had over a century in which to evolve from its German and French roots[59] into conformity with Rumanian culture before it was overlaid by the Soviet system and the Rumanian economy was replaced by socialism. Thus, the Rumanian accounting system has now had to evolve to conform to two different social systems. Tracing its evolution should provide information useful in the study of how and why accounting systems change over time.

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[59] C. G. Demetrescu, *Istorie contabilității* [*The History of Accounting*] (Bucharest: Editura ştiintifica, 1972).

## APPENDIX 1

Appendix 1 presents the journal entries used to record several of the components of the accounting cycle.

### Appendix 1A

Appendix 1A records the payroll cycle.[60]

1. Cash is obtained at the bank to make the fortnightly wage payment. This cash advance payment is made before any entry is made to an expense account.

| | | |
|---|---|---|
| Cash | 67,000 | |
| Current account | | 67,000 |

2. The advance wages are paid.

| | | |
|---|---|---|
| Discounts with personnel | 67,000 | |
| Cash | | 67,000 |

3. At the end of the month, the total wage expense is found to have been 172,000 lei for all departments.

| | | |
|---|---|---|
| Basic production expenses | 60,000 | |
| Common expenses of the section | 72,000 | |
| General expenses of the enterprise | 15,000 | |
| Expenses of auxiliary activities | 25,000 | |
| Discounts with personnel | | 172,000 |

4. Income tax to be withheld is calculated.

| | | |
|---|---|---|
| Discounts with personnel | 14,300 | |
| Discounts with the state budget | | 14,300 |

5. A supplementary pension is deducted.

| | | |
|---|---|---|
| Discounts with personnel | 2,740 | |
| Discounts for social security | | 2,740 |

6. Payroll deductions for workers' rent and utilities are recorded (to be paid by the enterprise).

| | | |
|---|---|---|
| Discounts with personnel | 12,000 | |
| Creditors | | 12,000 |

7. Cash is obtained from the bank to make the payment.

| | | |
|---|---|---|
| Cash | 75,960 | |
| Current account | | 75,960 |

8. Personnel are paid. Total pay is 172,000 lei, less 67,000 lei advance payments, less 2,740 lei supplementary pension, less 14,300 lei tax withheld, less 1,800 lei which was not disbursed.

| | | |
|---|---|---|
| Discounts with personnel | 74,160 | |
| Cash | | 74,160 |

9. The 1,800 lei not disbursed is returned to the bank.

| | | |
|---|---|---|
| Current account | 1,800 | |
| Cash | | 1,800 |

[60] Lanczos, *Elemente,* pp. 115-24.

The 1,800 lei not disbursed is recognized as a liability.

| | | |
|---|---|---|
| Discounts with personnel | 1,800 | |
| Creditors | | 1,800 |

10. The tax withheld is transferred to the state's bank account from the enterprise's bank account.

| | | |
|---|---|---|
| Discounts with the state budget | 14,300 | |
| Current account | | 14,300 |

11. A 15 percent social security (*asigurări sociale*) is calculated. This payment is allocated to the overhead accounts.

| | | |
|---|---|---|
| Common expenses of the section | 19,800 | |
| General expenses of the enterprise | 2,250 | |
| Expenses of auxiliary activities | 3,750 | |
| Discounts for social security | | 25,800 |

12. Cash for a disability payment is collected from the bank.

| | | |
|---|---|---|
| Cash | 3,100 | |
| Current account | | 3,100 |

13. And paid.

| | | |
|---|---|---|
| Discounts for social security | 3,100 | |
| Cash | | 3,100 |

14. The social security contribution is removed from the enterprise's bank account (2,740 lei supplementary pension plus 25,800 lei basic social security less 3,100 lei disability payment).

| | | |
|---|---|---|
| Discounts for social security | 25,440 | |
| Current account | | 25,440 |

15. Amounts withheld for workers' rent and utilities are paid.

| | | |
|---|---|---|
| Creditors | 12,000 | |
| Current account | | 12,000 |

16. The wages not disbursed in item 9 are collected from the bank and paid to the worker.

| | | |
|---|---|---|
| Cash | 1,800 | |
| Current account | | 1,800 |
| Creditors | 1,800 | |
| Cash | | 1,800 |

**Appendix 1B**

Appendix 1B records the collection of costs into finished goods.[61]

1. Actual costs directly traceable to the producing department corresponding to this month's actual production are collected.

| | | |
|---|---|---|
| Expenses of basic production | 210,000 | |
| Materials | | 110,000 |
| Transportation in | | 10,000 |
| Discounts with personnel | | 60,000 |
| Discounts for depreciation | | 30,000 |

[61] Enache, *Bazele,* pp. 127-34.

2. Indirect costs are collected.

| | | |
|---|---|---|
| Expenses for auxiliary activities | 10,000 | |
| Materials | | 3,700 |
| Transportation in | | 300 |
| Discounts with personnel | | 4,000 |
| Discounts for depreciation | | 2,000 |
| Common expenses of the section | 50,000 | |
| Materials | | 23,000 |
| Transportation in | | 3,000 |
| Discounts with personnel | | 16,000 |
| Discounts for depreciation | | 8,000 |
| General expenses of the enterprise | 40,000 | |
| Materials | | 9,000 |
| Transportation in | | 1,000 |
| Discounts with personnel | | 17,000 |
| Discounts for depreciation | | 13,000 |

3. Indirect costs are allocated in stages, first from the auxiliary activities to the enterprise and general section levels. Then the enterprise and general expenses are allocated to the basic production level.

| | | |
|---|---|---|
| Common expenses of the section | 7,500 | |
| General expenses of the enterprise | 2,500 | |
| Expenses of auxiliary activities | | 10,000 |
| Expenses of basic production | 100,000 | |
| Common expenses of the section | | 57,500 |
| General expenses of the enterprise | | 42,500 |

4. Actual costs of work in process are calculated. Cost of work in process at the beginning of the month (10,000 lei) is added to the total expenses of the basic production found above (310,000 lei), and work in process at the end of the month (40,000 lei) is deducted. The result is the actual cost of finished goods and is transferred into an account called "discount of production" (*decontarea productiei*).

| | | |
|---|---|---|
| Discount of production | 280,000 | |
| Expenses of basic production | | 280,000 |

5. Finished goods are debited for the planned (standard) cost of goods produced this month, and discount of production is credited.

| | | |
|---|---|---|
| Finished goods | 300,000 | |
| Discount of production | | 300,000 |

6. The difference between standard and actual is recorded. (This difference is eventually closed into the income from the basic activities account.[62])

| | | |
|---|---|---|
| Discount of production | 20,000 | |
| Difference of cost of finished goods | | 20,000 |

7. Expenses of basic production are left with a balance of 40,000 lei, which is relabeled unfinished goods (*productie neterminată*) and is a balance sheet account.

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[62] Lanczos, *Elemente*, pp. 139-40.

**Appendix IC**

Appendix IC records the selling and receivables cycles for the goods recorded in appendix 1B.[63]

1. The goods produced in Appendix 1B are sold for 340,000 lei. At the time of sale, their actual cost was not known since they were recorded at standard cost.

| | | |
|---|---|---|
| Products invoiced | 300,000 | |
| Finished goods | | 300,000 |

2. The variance account established in item 6 of Appendix 1B is relabeled.

| | | |
|---|---|---|
| Difference in cost of finished goods | 20,000 | |
| Difference in cost of products invoiced | | 20,000 |

3. Payment of selling expenses is recorded.

| | | |
|---|---|---|
| Selling expenses | 4,000 | |
| Cash | | 4,000 |

4. The cost of the goods invoiced is borrowed.

| | | |
|---|---|---|
| Current account | 300,000 | |
| Borrowings on documents in the course of collection | | 300,000 |

5. The customer pays the 340,000 lei, which is deposited in the bank. Although the account credited translates as "revenue," it acts as an income summary account, and its ultimate balance appears in the income statement as a net figure (see Appendix 3), so we may consider it income.

| | | |
|---|---|---|
| Borrowings on documents in course of collection | 300,000 | |
| Turnover tax fund | 24,000 | |
| Planned benefits or losses adhering to collected invoices (fund) | 16,000 | |
| Income from basic activities | | 340,000 |

6. Two more entries are necessary to deduct the turnover tax from income and to record its payment.

| | | |
|---|---|---|
| Income from basic activities | 24,000 | |
| Discounts with the state budget | | 24,000 |
| Discounts with the state budget | 24,000 | |
| Turnover tax fund | | 24,000 |

7. A liability of 4,000 lei to the bonus fund is recognized, and 12,000 lei is withdrawn from the planned benefits fund, to be transferred to the state bank account for the disposition of the next higher level of the organization.

| | | |
|---|---|---|
| Distribution of benefits | 16,000 | |
| Planned benefits or losses adhering to collected invoices (fund) | | 12,000 |
| Bonus fund | | 4,000 |

[63] Ibid., pp. 129-43.

8. The variance from item 2 of this appendix, the budgeted cost of goods produced, and selling expenses are closed to income at the end of the period.

| | | |
|---|---|---|
| Income from basic activities | 284,000 | |
| Difference in cost of products invoiced | 20,000 | |
| Products invoiced | | 300,000 |
| Selling expenses | | 4,000 |

9. This leaves income from basic activities with a credit balance of 32,000 lei, which is closed to benefits and losses — the net income for the period.

| | | |
|---|---|---|
| Income from basic activities | 32,000 | |
| Benefits and losses | | 32,000 |

10. An increase of 10,000 lei in the current fund is recorded.

| | | |
|---|---|---|
| Distribution of benefits | 10,000 | |
| Current asset fund | | 10,000 |

11. At the beginning of the next year, the benefits and losses account is closed, with 4,000 lei to cover the bonus fund, 10,000 lei to cover the increase in the current asset fund, and a "dividend" payment of 18,000 lei owed to the state.

| | | |
|---|---|---|
| Benefits and losses | 32,000 | |
| Discounts with the state budget | | 18,000 |
| Distribution of benefits | | 14,000 |

12. After the annual report is accepted, distribution of benefits is closed, and the discounts with the state budget are debited to represent the payouts to the state budget in the previous year.

| | | |
|---|---|---|
| Discounts with the state budget | 12,000 | |
| Distribution of benefits | | 12,000 |

13. The state has been paid 12,000 lei during the year, but the state is owed a total of 18,000 lei as a "dividend," so 6,000 lei remains to be paid.

| | | |
|---|---|---|
| Discounts with the state budget | 6,000 | |
| Benefits or losses planned adhering to invoices collected (fund) | | 6,000 |

If the enterprise had remitted more money to the state budget than its profits, the difference would either be carried forward to the next period or refunded to the enterprise at its request (with a debit to "planned benefits or losses adhering to invoices collected" and a credit to "distribution of benefits").

## APPENDIX 2. BALANCE SHEET[64]

**Balance Sheet**
**As of December 31, 1983**

Assets (Activ)

| | Title | Situation as of beginning of the year | Situation as of end of the year |
|---|---|---|---|
| | A. FIXED ASSETS | 77,124,500 | 83,701,410 |
| 1. | Value of inventory of fixed assets | 105,650,000 | 120,181,150 |
| 2. | Use of fixed assets | 28,525,500 | 36,479,740 |
| | B. CURRENT ASSETS | 29,712,500 | 29,863,543 |
| | I. Material assets and expenditures | 28,921,600 | 28,428,621 |
| 1. | Materials | 18,490,500 | 18,433,093 |
| 2. | Finished goods | 1,900,500 | 1,106,028 |
| 3. | Semi-fabricated goods | .... | .... |
| 4. | Unfinished goods | 1,790,000 | 2,800,000 |
| 5. | Expenditures for distribution | 190,000 | 100,000 |
| 6. | Products, goods, and services invoiced | 6,550,600 | 5,989,500 |
| 7. | Goods | .... | .... |
| 8. | Packaging | .... | .... |
| | II. Monetary assets | 627,900 | 1,338,600 |
| 1. | Cash in bank | 141,600 | 399,500 |
| 2. | Other monetary assets | 486,300 | 939,100 |
| | III. External participation | .... | .... |
| | IV. Discounts with third parties | .... | .... |
| 1. | Internal clients and debtors | 137,450 | 94,950 |
| 1.1 | Internal clients | .... | .... |
| 1.2 | Internal debtors | 137,450 | 94,950 |
| 2. | External clients and debtors | .... | .... |
| 2.1 | External clients | .... | .... |
| 2.2 | External debtors | .... | .... |
| 3. | Discounts with the budget, social insurance and amortizations | .... | .... |
| 4. | Discounts within the framework of the system | 25,550 | 1,372 |
| | C. ASSETS AND EXPENDITURES FOR INVESTMENTS | 10,670,000 | 14,600,000 |
| | D. PAYMENTS AND LOSSES | 14,750,000 | 17,454,000 |
| 1. | Payments from results | 14,750,000 | 17,454,000 |
| 2. | Losses | .... | .... |
| | TOTAL ASSETS | 132,257,000 | 145,618,753 |
| | System accounts and accounts evidencing debts | | |
| | Goods received in custody | 146,000 | 23,000 |
| | Total | 146,000 | 23,000 |

PASSIVES (Pasiv)

[64] The balance sheet in Appendix 2 is from Rusu (pp. 212-13) and articulates with the profit and loss statement presented in Appendix 3.

| | Title | Situation as of beginning of the year | Situation as of end of the year |
|---|---|---|---|
| | A. OWN SOURCES AND LOANS FOR FIXED ASSETS | 77,124,500 | 83,701,410 |
| 1. | Fixed asset fund | 77,124,500 | 83,701,410 |
| 2. | Bank loans | .... | .... |
| | B. OWN SOURCES AND LOANS FOR CURRENT ASSETS | 29,339,000 | 29,003,503 |
| | I. Own sources for current assets | 26,737,000 | 26,690,165 |
| 1. | Fund for current assets | 26,102,000 | 26,160,165 |
| 2. | Financing for introducing new technology | 635,000 | 530,000 |
| | II. Loans for current assets | 720,000 | 640,000 |
| 1. | Short-term loans | 720,000 | 640,000 |
| 2. | Loans for imports | .... | .... |
| 3. | Loans for exports | .... | .... |
| 4. | Loans in arrears from basic activities | .... | .... |
| | III. Discounts with third parties | 1,733,300 | 1,422,138 |
| 1. | Internal suppliers and creditors | 1,469,900 | 1,083,050 |
| 1.1 | Internal suppliers | 930,000 | 530,000 |
| 1.2 | Internal creditors | 49,000 | 33,050 |
| 1.3 | Other obligations | 490,900 | 530,000 |
| 2. | External suppliers and creditors | .... | .... |
| 2.1 | External suppliers | .... | .... |
| 2.2 | External creditors | .... | .... |
| 3. | Discounts with the state budget, social insurance, and amortization | 263,400 | 339,088 |
| | IV. Discounts within the framework of the system | .... | .... |
| | V. Other sources | 148,700 | 251,200 |
| 1.1 | Anticipated and unrealized revenues | .... | .... |
| 1.2 | Reserves for preliminary expenditures | 115,700 | 140,000 |
| 1.3 | Other funds and financing | 33,000 | 110,200 |
| | C. SOURCES FOR INVESTMENTS | 10,670,000 | 14,600,000 |
| | D. BENEFITS AND SUBSIDIES | 15,123,500 | 18,314,040 |
| 1. | Benefits | 15,123,500 | 18,314,040 |
| 2. | Subsidies | .... | .... |
| | TOTAL PASSIVE | 132,257,000 | 145,618,953 |
| | System accounts evidencing credits | | |
| | Deposits of goods in custody | 146,000 | 23,000 |
| Total | | 146,000 | 23,000 |

**APPENDIX 3. PROFIT AND LOSS STATEMENT**[65]

| Benefits and Losses | | | |
|---|---|---|---|
| Line number | Title | Losses | Benefits |
| A | B | 1 | 2 |
| | A. Benefits and losses from realization of basic activities | | |
| 1. | From sales of internally fabricated products | | 16,784,635 |
| 2. | From execution of goods and services with an industrial character | | 362,400 |
| | Total A | | 17,147,035 |
| | B. Benefits and losses from diverse activities | | |
| 3. | From sales of goods through owned retail stores | | 1,037,000 |
| | Total B | | 1,037,000 |
| | C. Benefits and losses from realization of packing and materials | | |
| | From sales of packaging | | .... |
| | From sales of materials and other goods | | .... |
| | Total C | | .... |
| | D. Other benefits and losses | | |
| 4. | Benefits from fines and penalties | | 3,550 |
| 5. | Losses caused by calamities and by interruptions caused by calamities | 17,410 | |
| 6. | Other benefits and losses from the current year | .... | 113,865 |
| 7. | Other benefits and losses from the previous year | .... | .... |
| | Total D | 17,410 | 147,415 |
| | Total A + B + C + D | 17,410 | 18,331,450 |
| | Balance of benefits | × | 18,314,040 |
| | Balance of losses | .... | 18,314,040 |

[65] Rusu, *Bazele,* p. 208.

**APPENDIX 4. CHART OF ACCOUNTS**[66]

| Group | Account | Name |
|---|---|---|
| | | CLASS 1 — FIXED ASSETS |
| 10 | | Fixed assets |
| | 100 | Fixed assets |
| | 101 | Use of fixed assets (accumulated depreciation) |
| | | CLASS 2 — TANGIBLE CIRCULATING ASSETS (current assets) |
| 20 | | Materials and inventoried objects |
| | 200 | Materials |
| | 201 | Inventoried objects in warehouse |
| | 202 | Inventoried objects in use |
| | 203 | Use of inventoried objects (depreciation) |
| | 204 | Expenditures for transportation-acquisition |
| | 205 | Materials and inventoried objects in course of acquisition |
| | 206 | Materials and objects of inventory found at third parties (consignments) |
| 21 | | Animals |
| | 211 | Young animals and those being fattened |
| 22 | | Products |
| | 220 | Finished goods |
| | 221 | Difference in price of finished goods (variance) |
| | 222 | Semi-fabricated goods |
| | 223 | Difference in price of semi-fabricated goods |
| | 224 | Goods found at third parties |
| | 225 | Invoiced products, things, and services |
| | 226 | Difference in price of invoiced products, things, and services (variance) |
| 23 | | Merchandise |
| | 230 | Merchandise in warehouse |
| | 231 | Merchandise in retail units |
| | 234 | Merchandise in course of acquisition |
| | 235 | Refused merchandise in the hands of customers |
| | 236 | Merchandise found at third parties |
| | 237 | Shipped merchandise |
| | 238 | Results of imports |
| | 239 | Commercial allowances and supplements |
| 25 | | Packaging |
| | 250 | Packaging |
| | 251 | Allowance for packaging |
| 29 | | Other material assets |
| | 290 | Preliminary arrangements and work camps |
| | 292 | Replacement parts |
| | 293 | Objects destined for rent |
| | 294 | Use of objects destined for rent |
| | | CLASS 3 — MONETARY ASSETS |
| 30 | | Cash on hand |
| | 300 | Cash |

[66] USECOM, *Instructiuni*, pp. 414-17.

**APPENDIX 4 (cont.)**

| Group | Account | Name |
|---|---|---|
| 31 | | Cash in bank for basic activities |
| | 310 | Cash in bank |
| 33 | | Cash in bank for other activities |
| | 339 | Cash in bank for other activities |
| 34 | | Current accounts |
| | 340 | Current accounts |
| 39 | | Other monetary assets |
| | 390 | Checking account with limited total |
| | 391 | Credit |
| | 392 | Monetary assets in course of payment |
| | 399 | Other values |
| | | CLASS 4 — DISCOUNTS |
| 40 | | Discounts with clients (accounts receivable) |
| | 400 | Clients |
| | 401 | Clients with payment in installments |
| 41 | | Discounts with suppliers (accounts payable) |
| | 410 | Suppliers |
| | 411 | Agricultural acquirers and producers |
| 42 | | Discounts regarding payment for work (wages payable) |
| | 420 | Discount with cooperative workers and salaried workers |
| 43 | | Discounts regarding the budget and social insurance |
| | 430 | Discounts with the budget of the state |
| | 431 | Discounts regarding social insurance |
| 44 | | Discounts within the framework of the system |
| | 440 | Discounts between the unit and its superior organization |
| | 441 | Discounts between the unit and its subunits |
| | 443 | Discounts between the unit association and UCECOM |
| 49 | | Other discounts |
| | 494 | Discounts from revaluation of stocks |
| | 495 | Discounts from operations in the course of explanation |
| | 498 | Debtors (special receivables) |
| | 499 | Creditors (special payables) |
| | | CLASS 5 — EXPENSES |
| 50 | | Expenses of basic activities |
| | 500 | Expenses of basic production |
| | 501 | Expenses of selling |
| 51 | | Expenses of other activities |
| | 510 | Expenses of auxiliary activities |
| | 511 | Expenses for exploitation of equipment |
| | 512 | Expenses for internal works and constructions |
| 52 | | Expenses of administration |
| | 520 | Common expenses of the section |
| | 521 | General expenses of the unit |
| 53 | | Anticipated expenses |
| | 539 | Anticipated expenses |

**APPENDIX 4 (cont.)**

| Group | Account | Name |
|---|---|---|
| 54 | | Discount of production |
| | 540 | Discount of products |
| | 541 | Scrap and rework |
| | | CLASS 6 — REVENUES |
| 60 | | Realized sales |
| | 600 | Sales from basic activity |
| | 601 | Sales from other activities |
| 61 | | Anticipated and unrealized sales |
| | 610 | Anticipated sales |
| | 611 | Unrealized sales |
| | | CLASS 7 — FUNDS, RESERVES, FINANCING, AND RESULTS |
| 70 | | Own funds (statutory) |
| | 700 | Basic fund |
| | 702 | Social fund |
| | 705 | Amortization fund |
| | 706 | Fund for financing actions of general interest |
| 71 | | Diverse funds |
| | 710 | Funds for supplementary pay and bonuses |
| | 712 | Funds for organization of construction sites |
| | 715 | Funds for social activities |
| | 719 | Other funds |
| 73 | | Reserves |
| | 730 | Reserves for preliminary expenses |
| 74 | | Financing |
| | 749 | Other financing |
| 75 | | Financial results |
| | 750 | Benefits and losses (net income) |
| | 751 | Distribution of benefits |
| | | CLASS 8 — BORROWINGS |
| 80 | | Borrowings |
| | 800 | Short-term loans |
| | 806 | Loans for fixed assets |
| | 807 | Loans from exceeding the limits of the current account (bank overdrafts) |
| | 808 | Loans with restrictive conditions |
| | 809 | Loans in arrears |
| | | CLASS 9 — INVESTMENTS |
| 90 | | Assets for investments |
| | 901 | Cash for investments |
| | 902 | Equipment and material for investments |
| | 903 | Expenses of transportation-acquisition for investments |
| | 905 | Investments |

**APPENDIX 4 (cont.)**

| Group | Account | Name |
|---|---|---|
| 91 | | Discounts for investments |
| | 912 | Suppliers and contractors for investments |
| 92 | | Sources for investments |
| | 925 | Loans for investments financed by bank credit |
| | 929 | Loans with increased interest for investment |
| | | CLASS 0 — ACCOUNTS OUTSIDE THE BALANCE |
| 00-02 | | Common accounts |
| | 001 | Fixed assets taken on lease |
| | 002 | Unamortized value of fixed assets retired ahead of schedule |
| | 007 | Projects executed for investments which have been discontinued |
| | 010 | Value of materials received to be worked upon or repaired |
| | 011 | Value of materials received in custody |
| | 012 | Packaging to be returned |
| | 013 | Valuable documents within subsequent payment |
| | 014 | Guarantees deposited in the CEC (in the bank) |
| | 020 | Assets of dubious value |
| | 021 | Debtors removed from assets still being followed up |
| | 022 | Debtors from fines and penalties |
| | 023 | Technical documents, licenses, and rights |
| | 024 | Payments in cash for goods bought from the market fund |
| | 025 | Payments outside the Socialist sector |

# *Some Simpler Methods of Accounting for the Effects of Changing Prices*

SURENDRA P. AGRAWAL and KENNETH ROSENZWEIG*

The complexities of accounting for the effects of changing prices on financial statements could be lessened with the use of simpler accounting methods. Because of existing complexities, even the industrialized countries require only their larger business entities to provide inflation-adjusted information. Such information is prepared by making numerous adjustments to the traditional, historical cost-based data. For example, in the United Kingdom, inflation-adjusted income is calculated in two stages: operating profit and profit attributable to shareholders. These calculations are based on the concept of value to the business and require complicated adjustments with respect to cost of goods sold, depreciation, monetary working capital, and financial leverage.[1] In the United States, requirements are even more extensive; selected items must be reported under two different methods: current cost and restatement of historical cost in constant dollars.[2]

Absence of sophisticated accounting systems to produce the inflation-adjusted information and fear of excessive costs to develop new accounting systems are the main reasons smaller corporations in industrialized nations and business entities in most developing countries are

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[1] For details, see Accounting Standards Committee, "Current Cost Accounting," *Statement of Standard Accounting Practice No. 16* (1980).

[2] For details, see Financial Accounting Standards Board, "Financial Reporting and Changing Prices," *Statement of Financial Standards No. 33* (henceforth referred to as SFAS No. 33) (Stamford, Conn.: FASB, 1979).

not being asked to report inflation-related information.[3] Furthermore, it is often observed that when inflation rates are rather low, the interest in inflation accounting declines to a low level. The distorting effect of inflation, whether high or low, on the financial statements of all kinds of businesses, large or small, in all countries, creates the necessity for financial statement users to assess the impact of inflation. It is essential, therefore, that business entities in developing nations, as well as in industrialized countries, possess techniques which allow the reporting of the effects of changing prices on their financial statements to be both feasible and accurate, regardless of the extent of such changes. In the accounting literature, several simple methods based on one-line adjustments of net income and owner's equity have been proposed. Although such methods are claimed to be quite effective, they have received little exposure or attention. In his dissent to Statement of Financial Accounting Standards (SFAS) No. 33, David Mosso refers to one such method as deserving more supoprt than it has thus far received. Similarly, in his dissent to Statement of Financial Accounting Concepts (SFAC) No. 5, John March suggests that "income must first deduct a provision for maintenance of capital in real terms," and further states that "complex implementation should not be necessary to provide for the erosion of capital caused by the effects of inflation. . . ."[4] This paper explores and evaluates one-line adjustments as a possible alternative to the more complex methods used previously. The primary purpose of inflation accounting is discussed first, followed by an attempt to develop criteria for the evaluation of inflation accounting methods. Three one-line adjustment methods are then explained, and each is evaluated in terms of these criteria.

## PURPOSE OF INFLATION ACCOUNTING

A principal reason for the diversity of views as to an appropriate method of accounting for the effects of changing prices is the lack of a clear understanding of the primary purpose of such an exercise. Even the Financial Accounting Standards Board (FASB) failed to address the question adequately with the resulting indecisiveness inevitably reflected in the weaknesses mentioned earlier.

Several approaches may be taken. Because of the instability of the dollar as a unit of measurement, many people believe that financial

[3] For example, see paragraph 200 of SFAS No. 33.

[4] Financial Accounting Standards Board, *Statement of Financial Accounting Concepts No. 5,* "Recognition and Measurement in Financial Statements of Business Enterprises" (Stamford, Conn.: FASB, 1984), pp. 32-33.

statements should be prepared in units of general purchasing power (GPP) or constant dollars. This represents only a change in a technique, however, not a change in any of the principles of accounting.[5] Therefore, the question concerning the primary purpose of inflation accounting still remains unanswered. Moreover, in many countries outside the United States, accounting in GPP units has been rejected because such units were seen to be imaginary with no physical existence or usage, and because the technique does not account for the effects of changes in the particular prices relevant for a given business entity.[6]

A case has also been made for using valuation bases other than historical cost, such as current replacement cost, exit value, or economic value. But it is generally recognized that these bases represent different attributes of the same financial statement item.[7] Such values usually differ from each other and from historical cost even in the absence of changing prices. Therefore, adoption of a particular valuation system cannot be regarded as the primary purpose of inflation accounting. Values of two or more attributes of various items might be found useful, however, in many decision situations,[8] but their disclosure need not depend upon the use of any particular method of inflation accounting.

The concept of capital maintenance provides the theoretical basis for determination of income, as well as invested capital on the balance sheet. Analogous to the recovery of cost, it is the point that divides return *of* capital from return *on* capital: returns in excess of the amount necessary to maintain capital capacity are earnings; returns below that point cause net losses.[9] Several alternative capital maintenance concepts have been advocated, including the following:

1. Financial capital measured in nominal monetary units;
2. Financial capital measured in constant dollars; and
3. Physical capital that represents operating capability.

While a traditional, historical cost system helps achieve 1, its failure

[5] Financial Accounting Standards Board, "Financial Reporting in Units of General Purchasing Power," *Exposure Draft* (Stamford, Conn.: FASB, 1974), par. 34.

[6] For example, see the report of the Inflation Accounting Committee (Sandilands Committee), *Inflation Accounting* (London: Her Majesty's Stationery Office, 1975).

[7] For example, see Eldon S. Hendriksen, *Accounting Theory* (Homewood, Ill.: Irwin, 1977), p. 264.

[8] Ibid.

[9] Financial Accounting Standards Board, "An Analysis of Issues Related to Conceptual Framework for Financial Accounting and Reporting: Elements of Financial Statements and Their Measurement," *Discussion Memorandum* (Stamford, Conn.: FASB, 1976), par. 264.

to compensate for inflation is well documented in the accounting literature. A considerable difference of opinion exists as to which of the other two is an appropriate objective of inflation accounting. However, the differences among the three alternatives are caused mainly by inflation or changing prices, and in their absence the three concepts will produce identical results.

The achievement of a particular capital maintenance concept should be considered the primary purpose of inflation accounting since it provides an appropriate criterion for the determination of income under inflationary conditions. This is consistent with the fundamental objectives of financial statements as set out in the FASB's Statement of Financial Accounting Concepts No. 1.[10] Disclosure of the particular capital maintenance concept that an entity is trying to achieve would provide financial statement users with information helpful in assessing the amount, timing, and uncertainty of prospective cash flows, such as those from dividends, and for making rational decisions. A clear distinction between return *on* capital and return *of* capital would also result in a more appropriate evaluation of the performance of an entity's management.

One aspect of capital maintenance deserves further examination. Capital maintenance is primarily a long-term objective, that is, the effectiveness of a method of accounting in terms of the achievement of a concept of capital maintenance can be judged only by considering the long-term effect on income calculated under that method. For example, over the life of an asset, an accounting method attempts to reduce distributable income sufficiently so that the cash not distributed to owners due to the reduction would be adequate at the end of the asset's life for its replacement in terms of the adopted concept. But the capital maintenance concept does not define the amount of the reduction in income that is assignable to the different years of the asset's life. For example, it might be possible, in an extreme case, to account for the impact of lifetime inflation in a single year and still maintain adequate capital. To preclude such a possibility, the relationship of the year-to-year effect on income with the degree of inflation may be considered a criterion for evaluating the annual income adjustments. Since there would be no reduction in income if the inflation rate were zero, it seems reasonable that the amount of the reduction should be positively associated with the degree of inflation. For this purpose, the re-

[10] Financial Accounting Standards Board, "Objectives of Financial Reporting by Business Enterprises," *Statement of Financial Accounting Concepts No. 1* (Stamford, Conn.: FASB, 1978).

duction in income is the difference between the amount of net income as calculated under traditional accounting and that under the method of inflation accounting. Furthermore, the degree of inflation is measured by the relative change in the general price level or the specific prices faced by a particular company, depending on the concept of capital maintenance employed.

In summary, two criteria have been developed to evaluate the appropriateness of methods of inflation accounting: (1) achievement of the capital maintenance concept employed, and (2) association of the year-to-year effects on income with the degree of inflation.

In this section, the purpose of inflation accounting was discussed, and these two criteria were developed. The next section describes and illustrates three one-line inflation adjustment methods which are evaluated with respect to the two criteria in the concluding section of the paper.

## ONE-LINE ADJUSTMENT METHODS

The principal feature of these methods is that they provide a one-line adjustment in the income statement that encompasses the total impact of inflation for the period and reduces the income computed under historical-cost principles to an inflation-adjusted amount. The corresponding credits are accumulated in an account that is reported as one part of the invested capital of the entity. The amount of adjustment depends on two factors: (1) the capital maintenance concept adopted, either financial capital in constant dollars or physical capital; and (2) the method of computation, either a direct calculation based on owners' equity or an indirect calculation linked with a comprehensive revision of the financial statements. A permutation of these factors may lead to a number of methods since there could be many ways to prepare comprehensive revisions of financial statements to account for the effects of changing prices. Not all such permutations have been discussed in the literature, however, and this paper will discuss only the three that have been suggested. The important features of these methods will be described and illustrated here with a numerical example. The transaction data on which the example is based, the financial statements prepared under conventional historical-cost principles, and those in historical cost/constant dollars are given in the appendix. The data are for the complete three-year life cycle of the business from initial investment to liquidation. The simple example highlights the essential differences among the methods.

**The Price Waterhouse Method**

Price Waterhouse & Co. proposed a one-line inflation accounting method to the FASB while it was in the early stages of developing Statement No. 33.[11] This method reports all revenues and expenses on the income statement at historical cost, while a single line item, "provision for current impact of inflation," reduces net income to an amount equal to that on a comprehensively restated historical cost/constant dollar income statement. The amount of this provision is accumulated from year to year in an account called "provision for cumulative impact of inflation" in the stockholders' equity section of the balance sheet. In essence, the cumulative provision may be viewed as an appropriation of the historical cost-based retained earnings which is not available for distribution as dividends. It is therefore part of the invested capital of the enterprise.

Exhibit 1 shows the financial statements prepared under the Price Waterhouse method from the data given in the appendix. The provision for the current impact of inflation each year incorporates all the differences between the historical cost revenues and expenses and the comprehensively restated revenues and expenses. For example, the provision in Year One of the illustration could be explained as follows:

| | |
|---|---|
| Increased sales | $ 1,905 |
| Increased cost of goods sold | (1,429) |
| Loss from holding cash | (7,619) |
| Gain from holding debt | 6,000 |
| | $(1,143) |

The amount of the cumulative provision in the balance sheet is a simple accumulation of the provision made in all the periods to date. For example, the cumulative provision in Year Two, $3,548, is equal to the Year-One provision of $1,143 plus the Year-Two provision of $2,405.[12]

The Price Waterhouse method has the following significant features:

1. The various items in the financial statements are reported at their historical costs.
2. The historical-cost income is reduced by recognizing as a deduction

[11] Price Waterhouse & Co., "Financial Reporting and Changing Prices," a position paper submitted to the FASB in response to the latter's exposure draft dated December 28, 1978. The method was explained further by Joseph Connor (Chairman, Price Waterhouse & Co.) in "Inflation's Impact on Earnings, and a Formula for Full Disclosure," *Finance Magazine* (September/October 1978).
[12] The Price Waterhouse position paper referred to in footnote 11 did not completely define the treatment of the "cumulative provision." This was clarified by one of the authors of the position paper, Robert Hampton III, in two letters dated July 3 and October 6, 1980.

**Exhibit 1. Single-Line Linkage to Constant Dollar Financial Statements (Price Waterhouse Method)**

Income Statement

| | Year 1 | Year 2 | Year 3 |
|---|---|---|---|
| Sales | $40,000 | $66,000 | $96,000 |
| Cost of goods sold | (30,000) | (46,500) | (64,500) |
| Interest expense | ( 6,000) | ( 4,000) | ( 2,000) |
| | 4,000 | 15,500 | 29,500 |
| Provision for current impact of inflation | 1,143 | 2,405 | 9,605 |
| Net income | $ 2,857 | $13,095 | $19,895 |

Balance Sheet

| Assets | December 31, year 1 | 2 | 3 |
|---|---|---|---|
| Cash | $24,000 | $33,000 | $89,000 |
| Inventory | 60,000 | 46,500 | -0- |
| Total assets | $84,000 | $79,500 | $89,000 |
| Equities | | | |
| Loan payable | $40,000 | $20,000 | $ -0- |
| Stockholders' equity | | | |
| Contributed capital | 40,000 | 40,000 | 40,000 |
| Cumulative provision | 1,143 | 3,548 | 13,153 |
| Retained earnings | 2,857 | 15,952 | 35,847 |
| Total stockholders' equity | 44,000 | 59,500 | 89,000 |
| Total equities | $84,000 | $79,500 | $89,000 |

the current impact of inflation. Although the impact appears as a single-line adjustment, its computation incorporates the total effect of general inflation on the various items.

3. As a result of 2, the amount of retained earnings available for distribution as dividends is reduced.

4. The invested capital of the entity increases, thus preserving the amount contributed by the owners in terms of its general purchasing power or more.

5. The prior preparation of a comprehensive set of financial statements in constant dollars before the amount of the current impact of inflation can be computed is necessary.

#### The Grady Method

Paul Grady has proposed a method that does not require the prior preparation of comprehensively restated constant dollar financial

statements.[13] This method involves calculation of the adjustment to net income, called the "loss from general inflation," based on the decline in the purchasing power of the beginning-of-year owners' equity.[14] The loss is accumulated, year by year, in an account in the stockholders' equity section called "inflation adjustment" which is treated as a part of the invested capital of the entity.

Exhibit 2 contains the financial statements prepared under this method. Here, the first-year loss from general inflation is equal to the initial capital of $40,000 times the relative change in the general price level, (110 − 100)/100 during the year. In subsequent years, the loss from inflation is computed with reference to the beginning-of-year owners' equity, that is, $44,000 in Year Two, and the relative change in the general price level, that is, (124 − 110)/110 in Year Two.

Like the Price Waterhouse method, the Grady method involves reporting the various financial statement items at historical cost. The loss from general inflation is based, however, on the beginning balance of the owners' equity and thus does not require comprehensively restated statements. This leads to differences between the two methods in the amounts of income and retained earnings. Furthermore, the amount of invested capital may also differ although, in both cases, the amount contributed by owners is preserved in terms of its general purchasing power or more.

#### The Agrawal Method

Agrawal's proposed method is similar to the Grady method but substitutes a unique company price index for the general price index.[15] The company index is a weighted average of the specific price changes of the various expenditures which are required for the company's operations.

Exhibit 3 illustrates the use of this method. Since the company in the illustration purchases only inventory, the company index is computed

[13] Paul Grady, "Purchasing Power Accounting," *Price Waterhouse Review,* vol. 20, no. 3 (1975): 2-5. A method similar to this has been used by Chambers, but in conjunction with exit values rather than historical costs; see Raymond J. Chambers, "NOD, COG, and PuPU: See How Inflation Teases," *Journal of Accountancy* (September 1975): 63-73, and other works.

[14] This method has been described in more detail in Surendra P. Agrawal, "Accounting for Inflation," *Commonwealth Conference of Accountants* (Proceedings) (The Institute of Chartered Accountants of India, 1975), pp. 20-27. An earlier exposition of a similar method may also be found in S. P. Agrawal and A. S. Raj, "Accounting for Inflation," *Chartered Accountant* (March 1968): 479-84.

[15] Surendra P. Agrawal, "Accounting for the Impact of Inflation on a Business Enterprise," *Accounting Review* (October 1977): 789-809.

**Exhibit 2. Single-Line Common Dollar Direct Capital Adjustment Financial Statements (Grady Method)**

Income Statement

| | Year | | |
|---|---|---|---|
| | 1 | 2 | 3 |
| Sales | $40,000 | $66,000 | $96,000 |
| Cost of goods sold | (30,000) | (46,500) | (64,500) |
| Interest expense | ( 6,000) | ( 4,000) | ( 2,000) |
| | 4,000 | 15,500 | 29,500 |
| Loss from inflation | 4,000[a] | 5,600[b] | 2,879[c] |
| Net income | $ -0- | $ 9,900 | $26,621 |

Balance Sheet

| | December 31, year | | |
|---|---|---|---|
| | 1 | 2 | 3 |
| Assets | | | |
| Cash | $24,000 | $33,000 | $89,000 |
| Inventory | 60,000 | 46,500 | -0- |
| Total assets | $84,000 | $79,500 | $89,000 |
| Equities | | | |
| Loan payable | $40,000 | $20,000 | $ -0- |
| Stockholders' equity | | | |
| Contributed capital | 40,000 | 40,000 | 40,000 |
| Inflation adjustment | 4,000 | 9,600 | 12,479 |
| Retained earnings | -0- | 9,900 | 36,521 |
| Total stockholders' equity | $44,000 | $59,500 | $89,000 |
| Total equities | $84,000 | $79,500 | $89,000 |

[a] 40,000 × 110 − 100/100
[b] 44,000 × 124 − 110/110
[c] 59,500 × 130 − 124/124

on the basis of the prices of inventory only, which are assumed to be as follows:

| | Year | | |
|---|---|---|---|
| | 1 | 2 | 3 |
| January 1 | 100.0 | 112.5 | 121.5 |
| December 31 | 112.5 | 121.5 | 134.9 |

The first-year loss from inflation is equal to the initial capital of $40,000 times the relative change in the company price index, (112.5 − 100.0)/112.5 over the year. In subsequent years, the loss from inflation is computed with reference to the beginning-of-year owners' equity, $44,000 in Year Two, times the relative change in the company price index, (121.5 − 112.5)/112.5 in Year Two.

**Exhibit 3. Single-Line Current Cost Direct Capital Adjustment Financial Statements (Agrawal Method)**

Income Statement

| | Year 1 | Year 2 | Year 3 |
|---|---|---|---|
| Sales | $40,000 | $66,000 | $96,000 |
| Cost of goods sold | (30,000) | (46,500) | (64,500) |
| Interest expense | ( 6,000) | ( 4,000) | ( 2,000) |
| | 4,000 | 15,500 | 29,500 |
| Loss from inflation | 5,000[a] | 3,250[b] | 6,562[c] |
| Net income | ($ 1,000) | $11,980 | $22,938 |

Balance Sheet

| | December 31, year 1 | 2 | 3 |
|---|---|---|---|
| Assets | | | |
| Cash | $24,000 | $33,000 | $89,000 |
| Inventory | 60,000 | 46,500 | -0- |
| Total assets | $84,000 | $79,500 | $89,000 |
| Equities | | | |
| Loan payable | $40,000 | $20,000 | $ -0- |
| Stockholders' equity | | | |
| Contributed capital | 40,000 | 40,000 | 40,000 |
| Inflation adjustment | 5,000 | 8,520 | 15,082 |
| Retained earnings | ( 1,000) | 10,980 | 33,918 |
| Total stockholders' equity | 44,000 | 59,500 | 89,000 |
| Total equities | $84,000 | $79,500 | $89,000 |

[a] 40.000 × 110 — 112.5/100
[b] 44.000 × 121.5 — 112.5/112.5
[c] 59,500 × 134.9 — 121.5/121.5

Because of the use of the company-specific price index rather than a general price index, this method results in the reduction in the amounts of net income and retained earnings by different amounts from those under the Grady method. The capital is preserved in terms of the capability of the company to acquire similar assets (that is, physical capital) or more.

## AN EVALUATION OF THE THREE METHODS

The major advantage of these methods seems to be their simplicity and understandability. The basis of valuation of the various items in the financial statements continues to be historical cost with which a vast majority of users are quite familiar. Moreover, since the one-line items

added to the statements accumulate the overall impact of inflation rather than reporting it in several categories, they are perhaps easier to explain and understand. Furthermore, because of the use of historical cost as the basis of valuation, the statements prepared under these methods may be perceived as more objective than comprehensively revised statements (particularly those utilizing current costs).

It may be useful to explore further the economic substance behind the one-line adjustments made to income. Whether such adjustments are actually "losses" (that is, reductions in net assets) is debatable. In the Price Waterhouse method, the one-line adjustment to income, called provision for current impact of inflation, represents a summary of the modifications to various revenues and expenses and the gain or loss from holding monetary assets and liabilities, as is illustrated on page 162. Although some have argued that the gains or losses from holding monetary items are real declines in the purchasing power of the company's net assets, the modifications of revenues and expenses are merely differences between the historical cost and constant dollar amounts and do not seem to represent such declines. Furthermore, the loss from inflation under the Grady or Agrawal methods cannot be interpreted as a loss, in the sense of a reduction in net assets; it can only be understood as an additional recovery of cost required to maintain the capital of the company in accordance with the particular capital maintenance concept utilized and to leave the company as well off at the end of a period as it was at the beginning. Consequently, it seems desirable to view the one-line adjustments under all three methods as items necessary to restate income to an inflation-adjusted amount, rather than as losses.

The three methods are now analyzed and evaluated in terms of the criteria developed earlier.

**Capital Maintenance**

Both the Price Waterhouse and Grady methods preserve the amount contributed by the owners in terms of its general purchasing power or more. Thus both methods attempt to maintain financial capital in constant dollars. The actual maintenance, however, may be somewhat more than the required amount as is illustrated here for the earlier example:

| | |
|---|---|
| Invested capital at the end of year 3 | |
| Price Waterhouse method | \$40,000 + \$13,153 = \$53,153 |
| Grady method | \$40,000 + \$12,479 = \$52,479 |
| Amount of initial capital in constant dollars | \$40,000 × 130/100 = \$52,000 |

The excess over the constant dollar figure is caused by the existence of retained earnings. If the entire income as computed under the two methods had been distributed as dividends at the end of each year, the invested capital at the end of Year Three under both methods would have amounted to $52,000, thereby maintaining capital in terms of general purchasing power. The comprehensive historical cost/constant dollar financial statements do preserve this amount exactly since invested capital is $52,000 at the end of Year Three, as is shown in the appendix. The Price Waterhouse and Grady methods are, however, more conservative than constant-dollar accounting when an entity reinvests retained earnings in its operations in that they lead to the maintenance of a larger amount of capital.

The Agrawal method attempts to achieve the physical capital maintenance concept. Exhibit 3 shows that under this method, the invested capital at the end of the third year is $55,082, while the amount directly computed under the concept is $40,000 × 134.0/110 = $53,960. Again, the excess is due to the existence of retained earnings, and, in their absence, the invested capital under this method would equal the calculated figure.

The three methods may be modified so that they maintain only the original invested capital in terms of its general purchasing power or operating capability. These modifications may be achieved as follows:

1. Under the Price Waterhouse method, the amount of retained earnings may be forced to equal the amount of the retained earnings appearing in the comprehensive general price-level balance sheet. This would require a transfer from the provision for cumulative impact of inflation to retained earnings each year.
2. Under the Grady and Agrawal methods, the calculation of the loss from inflation might be based on the total of the original capital and inflation adjustment rather than total owners' equity.

#### Periodic Earnings

Exhibit 4 shows the association between the rate of inflation, as measured by the percentage change in the respective price index, and the reduction in income under the three methods. The table indicates that the reduction in income under the Price Waterhouse method is strongly but negatively related to the percentage change in the general price index. In the third year, when the rate of inflation is lowest, the reduction in income is highest, while in the second year when the inflation rate is highest, the reduction in income is lowest. Thus, this method does not seem to meet the second criterion developed earlier.

**Exhibit 4. Association of Percentage Change in Price Indexes with Reduction in Income for Three Single-Line Inflation Methods**

| | | Reduction in income | | | |
|---|---|---|---|---|---|
| Year | Percentage change in general price index | Price Waterhouse method | Grady method | Percentage change in company price index | Reduction in income — Agrawal method |
| 1 | 10 | $1,143 | $4,000 | 12.5 | $5,000 |
| 2 | 13 | 2,405 | 5,600 | 8.0 | 3,250 |
| 3 | 5 | 9,605 | 2,879 | 11.0 | 6,562 |

Exhibit 4 also indicates that the associations are positive for both the Grady and Agrawal methods. In the third year, when the percentage change in the general price index is lowest, the Grady method's reduction in income is also lowest, while in the second year when the inflation rate is highest, the reduction in income is also highest. Although the association between the percentage change in the company price index and the reduction in income under the Agrawal method is positive, it is not so strong as that under the Grady method. In the second year, when the inflation rate is lowest, the reduction in income is also lowest, while in the first year when the inflation rate is highest, the reduction in income is high but not the highest. Thus, both methods appear to meet this criterion to a large extent.

This evaluation underscores the basic differences among the three methods. But before firm, generalized conclusions can be reached, this subject needs to be studied further in at least three areas:

1. The particular capital maintenance concept that should be strived for under inflationary conditions, namely, financial capital in constant dollars or physical capital.
2. The appropriateness of the criteria used for evaluation.
3. Whether the positive and negative associations found in exhibit 4 are replicated with other examples and in other situations.

In view of their simplicity and effectiveness, these methods deserve serious consideration, particularly in those countries and for those business entities for which highly complex inflation adjustment methods may not be feasible or desirable. Furthermore, in periods of low-level, creeping inflation, a simplified method would be less costly to implement and therefore more attractive to company management.

**APPENDIX. TRANSACTION DATA**

| | Year 1 | Year 2 | Year 3 |
|---|---|---|---|
| Equity investment — Jan. 1 | $40,000 | | |
| Borrow (10% interest) Jan. 1 | 60,000 | | |
| Purchase inventory, June 30 of respective year | 3,000 @ $30 = $90,000 | 1,000 @ $33 = $33,000 | 500 @ $36 = $18,000 |
| Sell inventory, June 30 of respective year | 1,000 @ $40 = $40,000 | 1,500 @ $44 = $66,000 | 2,000 @ $48 = $96,000 |
| Repay loan — Dec. 31 of respective year | 20,000 | 20,000 | 20,000 |
| General price indexes | | | |
| January 1 | 100 | 110 | 124 |
| June 30 | 105 | 117 | 127 |
| December 31 | 110 | 124 | 130 |

Weighted average inventory method used.

### Historical Cost Financial Statements

Income Statement

| | Year 1 | Year 2 | Year 3 |
|---|---|---|---|
| Sales | $40,000 | $66,000 | $96,000 |
| Cost of goods sold | (30,000) | (46,500) | (64,500) |
| Interest expense | ( 6,000) | ( 4,000) | ( 2,000) |
| Net income | $ 4,000 | $15,500 | $29,500 |

Balance Sheet

| | December 31, year 1 | 2 | 3 |
|---|---|---|---|
| Assets | | | |
| Cash | $24,000 | $33,000 | $89,000 |
| Inventory | 60,000 | 46,500 | -0- |
| Total assets | $84,000 | $79,500 | $89,000 |
| Equities | | | |
| Loan payable | $40,000 | $20,000 | $ -0- |
| Stockholders' equity | | | |
| Contributed capital | 40,000 | 40,000 | 40,000 |
| Retained earnings | 4,000 | 19,500 | 49,000 |
| Total stockholders' equity | 44,000 | 59,500 | 89,000 |
| Total equities | $84,000 | $79,500 | $89,000 |

**Historical Cost/Constant Dollar Financial Statements**
**(Stated in Constant Dollars as of Respective Year-end)**

Income Statement

| | Year | | |
|---|---|---|---|
| | 1 | 2 | 3 |
| Sales | $41,905 | $68,549 | $96,268 |
| Cost of goods sold | (31,429) | (51,916) | (73,902) |
| Interest expense | (6,000) | (4,000) | (2,000) |
| | 4,476 | 13,033 | 21,366 |
| Loss from holding cash | (7,619) | (5,029) | (3,439) |
| Gain from holding debt | 6,000 | 5,091 | 968 |
| Net income | $ 2,857 | $13,095 | $19,395 |

Balance Sheet

| | December 31, year | | |
|---|---|---|---|
| | 1 | 2 | 3 |
| Assets | | | |
| Cash | $24,000 | $33,000 | $89,000 |
| Inventory | 62,857 | 52,916 | –0– |
| Total assets | $86,857 | $85,916 | $89,000 |
| Equities | | | |
| Loan payable | $40,000 | $20,000 | $ –0– |
| Stockholders' equity | | | |
| Contributed capital | 44,000 | 49,500 | 52,000 |
| Retained earnings | 2,857 | 16,916 | 37,000 |
| Total stockholders' equity | 46,857 | 65,916 | 89,000 |
| Total equities | $86,857 | $85,916 | $89,000 |

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All manuscripts submitted for consideration should be typed on 8½ x 11" paper and should be double-spaced throughout, including synopsis, footnotes, and bibliography. At least two copies should be submitted for review. Margins should be appropriately wide to facilitate editing. The title of the paper, the author's name, rank, and affiliation, and any acknowledgments should appear on the first page of the body of the manuscript. All pages, as well as bibliography, exhibits, and appendices, should be serially numbered. The beginning of each paragraph should be indented. Footnotes may be placed either at the bottom of the appropriate page, or on a separate page. Each manuscript should be accompanied by a brief synopsis of the article explaining its international significance.

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[1] William A. Dymsza, <u>Multinational Business Strategy</u> (New York: McGraw-Hill, 1972), pp. 49-53.
[2] Geoffrey Holmes, "Replacement Value Accounting," <u>Accountancy</u> (March 1972): 4-8.

### BIBLIOGRAPHY

Manuscripts may include a bibliography at the end of the paper. If so, such references are not to be limited to those references cited in the text. Each entry should contain all data necessary for identification. Citations should be arranged in alphabetical order necessary for identification. Multiple works by

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Robert L. Aliber and Clyde P. Stickney. "Accounting Measures of Foreign Exchange Exposure — The Long and Short of It." Accounting Review, January 1975, pp. 44-57.

American Institute of Certified Public Accountants. Accounting Research Bulletin No. 43. New York: AICPA, 1953.

———. "Financial Statements Restated for General Price Level Changes." Statement of the Accounting Principles Board No. 3. New York: AICPA, 1969.

Leonard Lorensen and Paul Rosenfield. "Management Information and Foreign Inflation." Journal of Accountancy, December 1974, pp. 98-102.

Lawrence Revsine. Replacement Cost Accounting. Englewood Cliffs, N.J.: Prentice-Hall. 1973.

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# Contents

# *Investment Appraisal Methods of Financial Analysts: A Comparative Study of U.S. and U.K. Practices*

JOHN ARNOLD, PETER MOIZER, and ERIC NOREEN*

## INTRODUCTION

Surprisingly little is known of the methods of investment appraisal used by financial analysts in the United States and the United Kingdom. Although several studies have sought to discover the sources of information used by analysts in each country, little attempt has been made to study other aspects of their decision processes or to compare the procedures adopted by U.S and U.K. analysts. Financial analysts are an important group of users of corporate accounting reports. They are both investors in their own right, when acting as portfolio managers, and advisers to other institutional and individual investors. As such, the use they make of accounting and other information should be of interest to capital market researchers and to accounting policy makers.

This paper reports the results of a questionnaire survey administered in the United States and the United Kingdom during 1981 and 1982. We attempt to provide a general description of the procedures used by both U.S. and U.K. financial analysts to appraise the equity stock of companies and to identify significant differences between the procedures adopted by the two groups of analysts. We first outline our research design and then provide a description of the results of the questionnaire survey, including an identification

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of significant differences between the responses of U.S. and U.K. financial analysts. The results of our study are then compared with the results of three other studies which compare the decision processes of U.S. and U.K. analysts. Finally, we provide a commentary on the general patterns revealed by our survey and on the significant differences between the responses of U.S. and U.K. analysts. Within each national group, analysts come from different backgrounds, receive different types of training, and work in environments which differ in several respects (accounting disclosure requirements, the structure of the market for analysts, and the available information processing technology). Our hypothesis is that, as a result of these differences, U.S. and U.K. financial analysts adopt security appraisal procedures which differ significantly in a number of ways.

## RESEARCH DESIGN

### Questionnaire

A first draft of the questionnaire was prepared based on interviews with ten financial analysists in the United Kingdom and on an examination of textbooks and research studies on financial analysis. The U.K. version of the questionnaire was finalized following discussions with colleagues and further comments from U.K. financial analysts. The U.S. and U.K. versions were very similar, the U.S. version being modified after discussions with several U.S. financial analysts primarily to include U.S. terminology where it differed from that used in the United Kingdom. The final questionnaires contained a total of sixty-nine individual questions which were, subject to terminological differences, identical for the two countries.

### Sample

The U.K. sample consisted of a random selection of 465 members of the Society of Investment Analysts. A further sample comprising forty nonmembers of the society was selected from a survey of U.K. investment managers published by Continental Illinois Ltd.[1] Subsequent tests revealed no significant difference between the two U.K. samples. The U.S. version of the questionnaire was sent to a random sample of 400 U.S. members of the Financial Analysts Federation.

The questionnaires contained questions concerning analysts' backgrounds, the security appraisal methods they use, the types of

[1] Continental Illinois Ltd., *Ranking of U.K. Investment Analysts — Seventh Annual Survey* (London: Continental Illinois Ltd., 1980).

forecast they make, the sources of information they perceive as being important, the extent to which discussions with company management are featured in the analysts' decision-making processes, and the criticisms they have of company annual reports. The U.K. questionnaires were sent during 1981. Of the U.K. sample of 505, 304 replies, equal to a response rate of 60 percent, were received. Of these respondents, 202 analyzed the ordinary shares of companies quoted on the U.K. Stock Exchange. The U.S. questionnaires were mailed during 1982. The U.S. response rate was 39 percent (155), of which 102 respondents analyzed the common stock of publicly traded companies. The remainder of this paper concerns only the 202 U.K. and 102 U.S. equity analysts.

To check for non-response bias, we compared replies received after second request letters were sent with those received before the second request was made. We found no evidence of a significant difference in responses for either the U.K. or the U.S. group of analysts.

## DESCRIPTION OF RESULTS

This section reports the results of the questionnaire survey. Where U.S. and U.K. responses were not significantly different, we generally report the combined result for the two groups of analysts. Where significant differences arise, the results are reported separately for each group.

A significance level of 5 percent was chosen as the critical level for reporting differences, and all differences to be discussed in this paper have a significance level of 5 percent or less. Of the sixty-nine questions, sixty-two produced ordinal scale answers, and seven produced categorical responses. The Mann-Whitney U test was used to compare the ordinal scale answers, and the chi-squared test to compare the categorical responses. Of the sixty-nine questions, thirty-one produced answers which were statistically different at the 5 percent level for the two samples of U.S. and U.K. analysts — many more differences than would be expected by chance. To facilitate comparisons between the two samples, the results for each sample are expressed as percentages.

The "average" analyst in both the United States and the United Kingdom works for an organization which employs just over ten analysts. He or she spends approximately 60 percent of the work week evaluating the common stock of publicly traded companies and analyzes approximately forty companies on a regular basis and an additional twenty-six on an irregular basis. U.S. analysts are

significantly more experienced than their U.K. counterparts; they have been engaged in financial analysis for an average of just under sixteen years, compared to twelve to thirteen years for U.K. analysts. Approximately 50 percent of both U.S. and U.K. analysts specialize in a particular market sector, and a similar percentage of both types of analyst themselves use the information they generate for the purposes of portfolio management.

### Appraisal Methods

The figures in exhibit 1 indicate that for both U.S. and U.K. analysts, the most used analysis technique is fundamental analysis with technical analysis a poor second and beta analysis/modern portfolio theory third.[2] Although the ranking of the three techniques is the same for U.S. and U.K. analysts, both fundamental analysis and beta analysis are used significantly more by U.S. analysts. The extent to which each technique is used is broadly consistent with its perceived usefulness, as presented in exhibit 2, except that, despite its greater use by U.S. analysts, beta analysis

**Exhibit 1. Frequency of Use of Methods of Investment Appraisal**

| | Almost always 96-100% | Usually 66-95% | Some-times 36-65% (In percentages) | Seldom 6-35% | Hardly ever 0-5% | Average* |
|---|---|---|---|---|---|---|
| Technical analysis† | 12.5 | 13.9 | 25.1 | 23.4 | 25.1 | 41.5 |
| Fundamental analysis‡ | | | | | | |
| United States | 86.2 | 9.8 | 2.0 | 0.0 | 2.0 | 93.5 |
| United Kingdom | 76.1 | 19.9 | 2.5 | 1.5 | 0.0 | 92.2 |
| Beta analysis/ Modern portfolio theory‡ | | | | | | |
| United States | 4.9 | 15.7 | 22.6 | 18.6 | 38.2 | 33.6 |
| United Kingdom | 2.0 | 4.5 | 18.4 | 24.4 | 50.7 | 21.1 |

* Responses are summarized as means, based on the midpoints of each frequency interval.
† No significant difference between U.S. and U.K. responses.
‡Responses from U.S. and U.K. analysts were significantly different and in consequence are shown separately.

[2] Fundamental analysis was described in the questionnaire as "the analysis of such fundamental factors as general business conditions, industry outlook, earnings, dividends, quality of management, etc." Technical analysis was described as "an analysis of market based factors such as stock price movements, charts, etc." Beta analysis/modern portfolio theory was described as "analyzing the responsiveness of the price of a particular company's stock to changes in the value of some market average."

**Exhibit 2. Perceived Usefulness of Methods of Investment Appraisal**

| | Extremely useful | Very useful | Moderately useful (In percentages) | Of little use | Of no use | Average* |
|---|---|---|---|---|---|---|
| Technical analysis† | 7.7 | 11.0 | 52.0 | 22.0 | 7.3 | 2.9 |
| Fundamental analysis‡ | | | | | | |
| United States | 75.5 | 19.6 | 4.9 | 0.0 | 0.0 | 4.7 |
| United Kingdom | 58.0 | 32.0 | 9.0 | 1.0 | 0.0 | 4.5 |
| Beta analysis/ Modern portfolio theory‡ | 1.0 | 5.0 | 41.6 | 38.7 | 13.7 | 2.4 |

* Responses are summarized as means, based on a five-point scale, 5 (extremely useful) to 1 (of no use).
† No significant difference between U.S. and U.K. responses.
‡ Responses from U.S. and U.K. analysts were significantly different and in consequence are shown separately.

is not perceived as being more useful by them than by their U.K. counterparts.

When evaluating a stock by fundamental analysis, U.S. analysts consider previous financial results over a longer period (an average of 5.7 years) than do U.K. analysts (an average of 4.6 years). The factors considered in fundamental analysis are reported in exhibit 3. Some 80 percent of both U.S. and U.K. analysts "almost always" or "usually" estimate what they believe a company's present price-earnings (PE) ratio should be. Most then use the estimated PE ratio to predict the company's market value. Also of importance to both U.S. and U.K. analysts are the company's net asset value, various financial ratios, and estimated future dividend yield. Various financial ratios are considered more frequently by U.S. than by U.K. analysts, whereas future dividend yield is estimated more often by U.K. analysts. Discounted cash flow (net present value — NPV) is the least considered factor by both groups of analysts, although it is estimated significantly more frequently by U.S. analysts. Nearly 63 percent of U.K. analysts "seldom" or "hardly ever" estimate net present value, compared with ony 34 percent of U.S. analysts.

Of the valuation bases used in fundamental analysis (exhibit 4), it is surprising, in view of the publicity given to "inflation" accounting on both sides of the Atlantic in recent years, that the conventional historical cost basis is considerably more popular than the constant dollar, liquidation, or replacement cost bases. The

**Exhibit 3. Factors Considered in Fundamental Analysis**

| | Almost always 96-100% | Usually 66-95% | Some-times 36-65% | Seldom 6-35% | Hardly ever 0-5% | Average* |
|---|---|---|---|---|---|---|
| | | | (In percentages) | | | |
| Company's net asset value† | 32.0 | 30.0 | 26.3 | 10.4 | 1.3 | 71.0 |
| Estimate of "true" value of PE ratio† | 48.5 | 31.9 | 11.5 | 4.7 | 3.4 | 80.1 |
| Estimate of market value by applying PE ratio to a forecast of next year's earnings† | 45.3 | 27.4 | 11.1 | 9.1 | 7.1 | 74.1 |
| Various financial ratios‡ | | | | | | |
| United States | 53.3 | 27.3 | 15.2 | 2.0 | 2.0 | 82.5 |
| United Kingdom | 35.2 | 30.2 | 22.1 | 6.0 | 6.5 | 71.4 |
| Estimate of future dividend yield‡ | | | | | | |
| United States | 30.3 | 18.2 | 25.3 | 14.1 | 12.1 | 60.3 |
| United Kingdom | 44.2 | 29.9 | 17.3 | 6.1 | 2.5 | 77.4 |
| Estimate of NPV of future cash flows‡ | | | | | | |
| United States | 25.3 | 18.2 | 22.2 | 13.1 | 21.2 | 53.9 |
| United Kingdom | 8.2 | 7.7 | 21.5 | 25.1 | 37.5 | 31.2 |

* Responses are summarized as means, based on the midpoints of each frequency interval.
† No significant difference between U.S. and U.K. responses.
‡ Responses from U.S. and U.K. analysts were significantly different and in consequence are shown separately.

only basis for which U.S. and U.K. responses were significantly different is replacement cost, which is used more frequently in the United Kingdom.

### Analysts' Forecasts

Features of analysts' forecasts are presented in exhibit 5. When evaluating a company's common stock, virtually all analysts forecast some aspects of the performance of the company or of its common stock. U.K. analysts forecast a significantly shorter period (between twenty-two and twenty-three months, on average) than do U.S. analysts (an average of nearly thirty months). Only 23 percent of U.K. analysts forecast more than two years ahead, compared to 55 percent of U.S. analysts.

Of the eleven factors included in exhibit 5, earnings per share is the most frequently forecast. Other factors, which are almost

**Exhibit 4. Fundamental Analysis: Frequency of Use of Alternative Asset Valuation Bases**

| | Usually | Sometimes (In percentages) | Seldom |
|---|---|---|---|
| Conventional historical cost* | 74.3 | 18.4 | 7.3 |
| Constant dollar* | 11.3 | 25.9 | 62.8 |
| Liquidation/Realization value* | 29.4 | 39.7 | 30.9 |
| Replacement cost/Current cost† | | | |
| United States | 15.2 | 48.9 | 35.9 |
| United Kingdom | 39.9 | 31.9 | 28.2 |

* No significant difference between U.S. and U.K. responses.
† Responses from U.S. and U.K. analysts were significantly different and in consequence are shown separately.

always or usually forecast by over 70 percent of both groups of analysts, are price-earnings ratio (81 percent), before-tax income (U.S. 78 percent, U.K. 88 percent), and after-tax income (U.S. 87 percent, U.K. 71 percent). The relative preference of U.K. analysts for before-tax income may reflect the more judgmental system of accounting for deferred taxation in the United Kingdom than in the United States.

### Influence of Information Sources

Exhibit 6 reports fifteen possible sources of information and indicates how influential each one is perceived to be by analysts. Eight of the fifteen possible sources produced responses which were significantly different for U.S. and U.K. analysts. Although both groups perceive the income statement and balance sheet to be the two most important sources of information, U.S. analysts rate both sources as more influential than do their U.K. counterparts. Of U.S. analysts, 95 percent consider the income statement to be of "vital influence" or "major influence," compared to 88 percent of U.K. analysts. Equivalent percentages for the balance sheet are 92 percent for the U.S. group and 87 percent for U.K. analysts. Other sources which are rated as being of either vital influence or major influence by a majority of both groups are statement of changes in financial position/statement of source and application of funds (U.S. 81 percent, U.K. 66 percent); quarterly results (U.S. 70 percent, U.K. 79 percent); discussions with company personnel (U.S. 67 percent, U.K. 69 percent); qualified audit report (U.S. 69 percent, U.K. 53 percent). Of these, the differences between U.S. and U.K. analysts are significant only for the statement of changes in financial position and a qualified audit report. In both of these cases, the source is perceived as being more influential by U.S. analysts than by their U.K counterparts.

**Exhibit 5. Features of Analysts' Forecasts**

| | U.S. mean response | U.K. mean response |
|---|---|---|
| How many months ahead are forecast* | 29.6 months | 22.5 months |
| How often each of the following factors is forecast† | | |
| Income before interest expense‡ | 73.9% | 69.4% |
| Earnings per share‡ | 88.9% | 87.9% |
| Price-earnings ratio‡ | 79.7% | 78.5% |
| Sales/Turnover* | 81.5% | 62.5% |
| Before-tax income* | 78.5% | 86.2% |
| After-tax income* | 84.2% | 74.4% |
| Cash flows* | 77.2% | 62.7% |
| Dividends* | 72.7% | 81.6% |
| Ratio of sales to invested capital* | 54.2% | 32.7% |
| Ratio of income to invested capital* | 73.1% | 51.9% |
| Market value of the stock* | 82.2% | 62.1% |

* Significant difference between U.S. and U.K. responses.
† Responses were given under five categories from "almost always, 96-100%" to "hardly ever, 0-5%," identical to those shown in exhibits 1, 3, and 7. The mean responses shown here are based on the midpoints of each frequency interval.
‡ No significant difference between U.S. and U.K. responses.

Of the remaining sources, the chairman's statement is considered to be at least a major influence by a majority of U.K. analysts. None of the other sources is rated as being of at least major influence by a majority of either group. In addition to the president's message/chairman's statement, government publications and statistics are regarded as being significantly more influential by U.K. analysts. On the other hand, U.S. analysts rate industry publications/trade journals and an unqualified audit report as being more influential than do U.K. analysts. In view of the existing accounting statements on "inflation accounting" in both the United States and the United Kingdom, the relatively low ranking of current cost data by both groups of analysts must be disappointing to both the Financial Accounting Standards Board in the United States and the Accounting Standards Committee in the United Kingdom.

We became aware of the perceived influence of discussions with company personnel during the initial interview stages of the survey. Their high degree of importance is particularly impressive because, as a source of information, they are less readily available and, in consequence, more costly than the annual accounts. Furthermore, their actual influence may be higher than reported. Respondents

**Exhibit 6. Influence of Various Information Sources**

| | U.S. mean response* | U.K. mean response* | U.S. rank | U.K. rank | Significance of difference |
|---|---|---|---|---|---|
| Company's annual report: | | | | | |
| President's message/Chairman's statement | 3.01 | 3.70 | 13 | 6 | † |
| Management's review/Directors' report | 3.20 | 3.36 | 9 | 8 | |
| Balance sheet | 4.51 | 4.31 | 2 | 2 | † |
| Income statement/ Profit & loss account | 4.61 | 4.34 | 1 | 1 | † |
| Statement of changes in financial position/ Source and application of funds | 4.24 | 3.79 | 3 | 5 | † |
| Current cost data | 3.02 | 3.12 | 11= | 10 | |
| Unqualified audit report | 2.91 | 2.05 | 14 | 15 | † |
| Qualified audit report | 3.91 | 3.51 | 4 | 7 | † |
| Quarterly results | 3.90 | 4.09 | 5 | 3 | |
| Government publications and statistics | 2.59 | 2.78 | 15 | 13 | † |
| Statistical and information services | 3.24 | 3.10 | 8 | 11 | |
| Financial press | 3.12 | 3.19 | 10 | 9 | |
| Industry publications/ Trade journals | 3.28 | 2.74 | 7 | 14 | † |
| Company personnel | 3.88 | 3.90 | 6 | 4 | |
| Other financial analysts | 3.02 | 2.79 | 11= | 12 | |

* Responses are summarized as means, based on a five-point scale: 5 (vital influence); 4 (major influence); 3 (some influence); 2 (minor influence); and 1 (no influence).

† Significant difference between U.S. and U.K. responses.

might have understated their true importance for fear that such disclosure could result in suspicions of "inside information" being used, with a consequent increase in the probability of such use being effectively controlled. Since the content of discussions with company personnel is not well known, we included a separate section concerning this item in the questionnaires.

### Discussions with Company Management

Most analysts in both countries discuss a company's financial performance with its management at least twice a year, and more than 30 percent have such discussions three or more times each year. Exhibit 7 reports the frequency that seven items of information are provided by company management during discussions.

### Criticisms of Annual Reports

Analysts were asked to express an opinion on five criticisms which might be made of company annual reports. Responses are reported in exhibit 8. Interestingly, for both U.S. and U.K. analysts, more respondents disagreed than agreed with the statement that management should include a forecast of the next year's sales and income in a company's annual report. In so far as analysts perceive

**Exhibit 7. Frequency of Provision of Information by Company Management**

| | Almost always 96-100% | Usually 66-95% | Sometimes 36-65% (In percentages) | Seldom 6-35% | Hardly ever 0-5% | Average* |
|---|---|---|---|---|---|---|
| Details of changes in product lines† | 23.0 | 35.2 | 31.6 | 4.7 | 5.5 | 67.9 |
| Details of research and development projects† | 10.2 | 29.1 | 40.2 | 14.6 | 5.9 | 56.9 |
| Management long-term objectives and plans† | 33.1 | 45.8 | 17.7 | 2.3 | 1.1 | 78.7 |
| Changes in key personnel† | 16.7 | 36.0 | 29.8 | 12.8 | 4.7 | 63.1 |
| Reasons for balance sheet changes† | 35.9 | 40.9 | 17.4 | 3.9 | 1.9 | 77.7 |
| Reasons for past operating performance† | 55.6 | 33.0 | 8.8 | 1.5 | 1.1 | 85.8 |
| Management comments on analyst's own forecasts‡ | | | | | | |
| United States | 27.1 | 25.9 | 30.6 | 8.2 | 8.2 | 64.7 |
| United Kingdom | 7.0 | 22.8 | 41.5 | 12.9 | 15.8 | 49.2 |

* Responses are summarized as means, based on the midpoints of each frequency interval.

† No significant difference between U.S. and U.K. responses.

‡ Responses from U.S. and U.K. analysts were significantly different and in consequence are shown separately.

**Exhibit 8. Criticisms of Annual Reports**

| | Strongly agree | Agree | Neutral (In percentages) | Disagree | Strongly disagree |
|---|---|---|---|---|---|
| Inadequate geographical analysis* | 13.4 | 38.8 | 32.7 | 13.7 | 1.4 |
| Insufficient indication of ease with which overseas funds can be transferred to United States/United Kingdom | 15.6 | 39.4 | 39.8 | 3.5 | 1.7 |
| Need for management forecast of next year's sales and income* | 10.7 | 22.8 | 27.2 | 23.1 | 16.2 |
| Insufficient segmental data† | | | | | |
| United States | 24.0 | 34.4 | 25.0 | 15.6 | 1.0 |
| United Kingdom | 33.3 | 39.5 | 21.0 | 4.1 | 2.1 |
| Need for detailed statement of cash flows† | | | | | |
| United States | 27.1 | 32.3 | 37.5 | 2.1 | 1.0 |
| United Kingdom | 16.8 | 35.2 | 34.2 | 12.8 | 1.0 |

* No significant difference between U.S. and U.K. responses.

† Responses from U.S. and U.K. analysts were significantly different and in consequence are shown separately.

part of their role as being the generation of forecasts, it is perhaps not surprising that they do not wish to see that part of their activities assumed by company management.

## COMPARISON WITH OTHER STUDIES OF U.S. AND U.K. FINANCIAL ANALYSTS

Few other studies attempt to compare the decision processes of U.S. and U.K. financial analysts. The three studies considered in this section are those by Belkaoui, Kahl, and Peyrard; Firth; and Chang and Most.[3] None of these studies investigated the methods of investment appraisal used by financial analysts, the content of analysts' forecasts, or the details of discussions between analysts and company management, all of which were important aspects of

[3] Ahmed Belkaoui, Alfred Kahl, and Josette Peyrard, "Information Needs of Financial Analysts: An International Comparison," *International Journal of Accounting* (Fall 1977); Michael Firth, "A Study of the Consensus of the Perceived Importance of Disclosure of Individual Items in Corporate Annual Reports," *International Journal of Accounting* (Fall 1978); and Lucia S. Chang and Kenneth S. Most, "An International Comparison of Investor Uses of Financial Statements," *International Journal of Accounting* (Fall 1981).

the present study. Consequently, the possible comparisons are rather limited.

Belkaoui, Kahl, and Peyrard (BKP) used a questionnaire to ascertain the value U.S., Canadian, and European analysts attached to twenty-nine items of information. No attempt was made to identify U.K. analysts in the European group. Although BKP discussed a "European method" of investment analysis and contrasted it with the "typical North American approach," they did not explain why they believed that European analysts are a homogeneous group; indeed, they hinted[4] that U.K. analysts might be expected to behave differently from their continental European colleagues. In view of this limitation (for purposes of comparability with our study) and because BKP's questions were more detailed and covered a much more restricted area than the present ones, detailed comparisons between the two studies are impracticable. As in the present study, however, BKP did conclude that there was a significant number of differences between North American and European analysts concerning the perceived value of different information sources.

Firth's questionnaire study primarily concerned different U.K. groups of users of accounting reports, including financial analysts as one group of users. However, he did include some comments on respects in which his results differed from those of similar U.S. studies. Firth commented particularly on two areas in which U.K. analysts seem to differ from the U.S. group. First, he concluded that U.K. analysts attach more importance to forecasts than do U.S. analysts. This conclusion differs from that which may be drawn from the evidence that suggests that U.S. analysts are more likely to forecast cash flows (exhibit 3) together with almost all other aspects of a company's performance except dividends (exhibit 5), and that U.S. analysts are more likely to receive management's comments on their own forecasts (exhibit 7). Firth's second conclusion was that U.K. analysts attach more importance to supplementary inflation-adjusted accounts than do their U.S. counterparts. The present results suggest that supplementary current cost data is viewed with an equal lack of enthusiasm on both sides of the Atlantic (exhibit 6), although U.K. analysts do make more use of replacement cost as a valuation basis in fundamental analysis than do U.S. analysts (exhibit 4).

Chang and Most also used a questionnaire survey. They investigated the importance of various information sources to individual

[4] Belkaoui, Kahl, and Peyrard, "Information Needs," 21.

investors, institutional investors, and financial analysts in the United States, the United Kingdom, and New Zealand. Unfortunately, their description of the sources of the analyst samples in the United States and the United Kingdom is rather vague, and their response rate from U.K. analysts was very low (23.4 percent). In consequence, it is not clear whether the differences between their results and those of the current study are due primarily to differences in sampling procedures and response rates, or to changes in the views and behavior of analysts between the time of their survey (1976) and of the present study (1981/82). As in the authors' study, Chang and Most discovered that the most important information sources for both U.S. and U.K. analysts are the income statement, balance sheet, statement of changes in financial position, interim reports, and communications with management (see their exhibits 2 and 6 and exhibit 6 here). Also as in the current study, they discovered that the statement of changes in financial position and the auditor's report are more important to U.S. analysts and that the president's message/chairman's statement is more important to U.K. analysts (their exhibit 10, our exhibit 6). Unlike the present authors, they found that advisory services are more important to U.S. analysts (no significant differences in our responses), that corporate annual reports are more important to U.K. analysts (the income statement, balance sheet, and statement of changes in financial position are all more important to U.S. analysts in our survey), and that communications with management are more important to U.K. analysts (no significant differences in our responses). (See Chang and Most's exhibit 5 and our exhibit 6.)

In summary, the three studies discussed here are less helpful than we might have wished in corroborating our results. Nevertheless, the Chang and Most study, which is perhaps the most easily comparable, does provide some support for the general pattern of our responses.

## COMMENTARY ON RESULTS

The primary analysis technique used by both U.S. and U.K. analysts is fundamental analysis. A possible explanation of the dominance of fundamental analysis is that this approach most closely fulfills one of the job specifications of the analyst — to identify those stocks which appear to be under- or over-valued by the market. In addition, fundamental analysis, more than technical analysis or beta analysis, provides analysts who report to third parties with an opportunity to show how much data they have collected and how

much analysis they have undertaken, both of which may increase the recipient's confidence in the analyst's recommendation and provide a feeling of "value for money." To a lesser extent, technical analysis may also provide this sort of opportunity to the analyst, since it permits the production of numerous charts which could impress the financially naive investor. Indeed, without a justification such as this, it is not clear why a majority of analysts use technical analysis at least "sometimes" (exhibit 1). If the capital market is weak-form efficient, any use of technical analysis appears irrational; its use presumably involves some cost but provides no benefits since the information it reveals is already fully incorporated into share prices.

The application of fundamental analysis depends heavily on the estimation of an appropriate price-earnings ratio and of accruals-based income numbers and earnings per share. Neither future cash flows nor various inflation-adjusted values are as important to the process as are conventional historical cost–based numbers. This conclusion conflicts with the sort of general approach which is widely recommended in academic articles and books on investment analysis. The recommended approach to security valuation generally involves discounting expected dividends or cash flows using a discount rate which reflects the covariance of the returns expected from the security with those expected from a market portfolio. The risk factor in the discount rate depends on the security's beta value (on that part of the variability of the security's returns which cannot be diversified away). The reasons for and implications of the differences between actual and recommended practice warrant further research, particularly to ascertain whether the two approaches lead to different security buy, hold, and sell recommendations.

The importance to analysts of different sources of information is as might be expected; the financial components of the annual report (with the exception of supplementary current cost information) tend to dominate all other sources except discussions with company personnel. The importance of discussions with company personnel is confirmed by other studies, and yet little is known about the content of such discussions. We have attempted to ascertain those broad areas which are discussed most frequently. A questionnaire survey is probably not the best means to discover from analysts details of their discussions with management; the fear that such details might be perceived as indications of inside information may prevent them from being frank in writing. Further

research in this area seems necessary, possibly based on direct observation and interviews. Such approaches might be more fruitful means of collecting information about analysts' discussions with company personnel than are questionnaire surveys.

**Comparison of U.S. and U.K. Analysts**

As noted previously, thirty-one of the sixty-nine questions in the questionnaire produced responses which were different at the 5 percent significance level for the two samples of U.S. and U.K. financial analysts. More differences than might be expected by chance seem to support the hypothesis stated earlier that significant differences exist between the security appraisal procedures of U.S. and U.K. analysts. Furthermore, the differences appear to conform to a general pattern that U.S. analysts undertake more formal analysis than do their U.K. counterparts. We now consider the evidence to support this assertion.

U.S. analysts make more use of fundamental analysis (exhibit 1) and regard it as being more useful (exhibit 2) than do U.K. analysts. The former group considers more years' previous results and makes more use of financial ratios than do U.K. analysts (exhibits 3 and 5). The U.S. group regards a company's income statement and balance sheet as more influential than do their U.K. counterparts (exhibit 6). In addition, U.S. analysts place a greater emphasis on forecasts of future performance than do U.K. analysts. Of the six significant differences in exhibit 5 concerning items which the analyst forecasts, five are forecast more frequently by U.S. analysts who also forecast further into the future (exhibit 5) and more often receive management comments on their own forecasts (exhibit 7). These results suggest a more thorough and formal analysis of a company's financial performance and prospects.

Another interesting difference between the two groups is that U.S. analysts seem to regard past and predicted cash flows as being more important than do U.K. analysts. They estimate the net present value of cash flows more frequently (exhibit 3) and forecast cash flows more often (exhibit 5) than do U.K. analysts. Furthermore, they perceive the influence of a company's statement of changes in financial position as being greater (exhibit 6) and believe more strongly that there is a need for companies to publish a more detailed statement of cash flows (exhibit 8) than do U.K. analysts. This emphasis on the analysis of corporate cash flows is a further indication of a higher level of formal analysis undertaken by U.S. analysts.

Two other significant differences between the two groups deserve

mention. The first is that U.S. analysts regard the auditor's report, whether qualified or unqualified, as being more influential than do their U.K. counterparts (exhibit 6). The second is that U.K. analysts place more emphasis on dividends; they estimate future dividend yield more frequently (exhibit 3) and forecast future dividends more often (exhibit 5) than do U.S. analysts.

A number of possible reasons for the differences between the procedures adopted by U.S. and U.K. analysts are possible, including different education and training backgrounds, and different work environments. Regarding the former reason, a more formal education and training in business and financial analysis may make it more likely that an analyst will adopt formal methods and techniques for the appraisal of securities. Chang and Most determined that over 85 percent of U.S. financial analysts had a degree in a business-related area, compared to only 50 percent of U.K. analysts.[5] Further evidence of formal training in financial analysis for U.S. analysts is provided by membership in the Institute of Chartered Financial Analysts (ICFA). Such membership is dependent on the analyst's satisfactorily completing examinations relating to financial analysis. To test whether the additional formal training required for membership of the ICFA explains at least some of the differences between U.S. and U.K. analysts, the present authors partitioned their U.S. sample according to whether analysts were members of the ICFA; 64 percent were members. We then compared the responses of each subgroup of U.S. analysts with the entire U.K. group. For many of the comparisons between all U.S. and U.K. analysts, significant differences arise between U.S. analysts who are ICFA members and U.K. analysts, rather than between U.S. analysts who are not members of the ICFA and U.K. analysts. In fourteen of the thirty-one cases where significant differences were observed between U.S. and U.K. analysts, the differences cease to be significant when the responses from U.K. analysts are compared only with responses from U.S. analysts who are not ICFA members, although part of the reduction in the number of significant differences may be due to a decrease in sample size. Included in the cases where differences cease to be significant are important responses concerning, for example, the frequency of use and perceived usefulness of fundamental analysis, the frequency of use of financial ratios, the frequency with which after-tax income and cash flows are forecast, the perceived influence of the income statement, balance sheet, and statement of changes in financial

[5] See Chang and Most, "International Comparison," exhibit 12.

position, and the need for more detailed statements of cash flows from companies.

This evidence suggests that the training and education of an analyst are likely to influence his security evaluation procedures. As we have noted, other factors relating to the environment in which the analyst works may be of at least equal importance. These factors may relate to the analyst's job specification or to the economic and legal nature of the national environment in which he practices. An analyst's job specification depends on the type of organization employing him or her and on the nature of responsibilities within that organization. For example, an analyst who has direct responsibility for the management of a securities portfolio may employ different appraisal methods and require different information than does an analyst who provides reports on individual securities to third parties.[6] If the job specifications of U.S. analysts differ from those of U.K. analysts, for example because there are relatively more or less portfolio managers among U.S. analysts than among their U.K. counterparts, the responses of the two groups to questions concerning appraisal methods and use of information are likely to be significantly different.

Other environmental factors which may vary on a national basis and which could explain differences between U.S. and U.K. responses include legislation and accounting standards concerning minimum disclosure levels and alternative accounting treatments in published corporate reports, the availability and cost of other information sources, the nature of the market for analysts' services, the availability and cost of information processing technology, and the role and status of the auditing profession. Further research into the relationship between factors such as these and the security evaluation techniques of financial analysts is needed to help to explain differences between the practices and procedures of different groups of analysts.

## SUMMARY

This paper has attempted to provide a general description of the security appraisal methods adopted by financial analysts in the United States and the United Kingdom and to highlight respects in which the methods used by the two groups of analysts differ. Both groups appear to attach more importance to accrual-based

[6] See Peter Moizer and John Arnold, "Share Appraisal by Investment Analysts — A Comparison of the Techniques Used by Portfolio and Non-Portfolio Managers," *Accounting and Business Research* (Winter 1984).

historical cost accounting numbers, particularly earnings, than to either inflation-adjusted accounting numbers or cash flows. Both groups also use fundamental analysis in preference to technical analysis or beta analysis, and they rely heavily on discussions with company personnel as a source of information.

We discovered many more significant differences between the procedures adopted by U.S. and U.K. analysts than could be explained by chance. We suggested a number of possible explanations for the differences observed, including national differences in education and training, job specifications, accounting treatments and disclosure, the market for analysts' services, available information processing technology, and the role of the auditing profession. Further research into the extent and impact of these environmental differences appears to be warranted.

# *The International Accounting Standards Committee: A Performance Evaluation*

S. M. McKINNON and PAUL JANELL*

The International Accounting Standards Committee (IASC) was established in 1973 by the professional accounting institutes of nine major countries in response to increasing calls for harmonization of worldwide accounting regulations. Since its inception, the IASC has expanded to include accountancy bodies in sixty-five countries. It has been acclaimed as the most successful and influential international body in achieving some degree of harmonization of standards. A review of the IASC, its objectives, and its achievements in order to evaluate the overall performance of the IASC in its first twelve years is appropriate.

This study analyzes the role of the IASC. After briefly commenting on the general desirability of harmonization, the study identifies the IASC objectives and analyzes three contemporary accounting issues in light of these objectives. The final step is an analysis of the role the IASC should play in consideration of its successes and failures.

## IS HARMONIZATION DESIRABLE?

Much of the impetus for harmonization has focused on the need for comparative information in a world of expanding capital markets. Growing competition for both domestic and international financing has produced a seller's market for money, where the sellers have the power to demand additional information concerning potential investments. Differing standards present an obstacle to optimal economic resource allocation, and the necessity to

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accommodate differing accounting standards places a dual burden on the multinational executive concerned with financial reporting.

Since Jacob Kraayenhof's seminal paper on international harmonization,[1] few have questioned the desirability of harmonized standards. Most opponents have focused on the practical difficulties of achieving agreements among different countries, given the differences in background, tradition, needs of economic environments, and the inevitable challenge of uniformity to state sovereignty.

## HOW EFFECTIVE HAS THE IASC BEEN?

The fact that harmonization itself can be assumed to be a worthwhile goal is not sufficient justification to conclude that the efforts of the IASC have been the best way to fulfill that goal. Critics of harmonization may be quite right when they state that complete international standardization is impossible. Since that objective is the essential premise of the IASC's existence, the IASC objectives should be analyzed in relation to what it has actually accomplished in its brief years of operation.

### IASC Objectives

The board of the IASC is charged with directing its major operations. The board has two representatives from the original founding members, plus two representatives from two additional member accounting organizations. The board issues exposure drafts (EDs) of proposed standards generally followed by the standards themselves. To take effect, a standard must be approved by a minimum of three-fourths of the committee membership. As of May 1985, IASC had issued over twenty Statements of International Accounting Standards, and numerous exposure drafts were outstanding.

The objectives of the IASC, as expressed in the agreement under which it was established, are ". . . to formulate and publish in the public interest, basic standards to be observed in the presentation of audited accounts and financial statements and to promote their worldwide acceptance and observance."[2] Several key points are expressed in this statement. The statement identifies two major goals: (1) to formulate standards, and (2) to promote their accep-

[1] Jacob Kraayenhof, "International Challenges for Accounting," *Journal of Accountancy* (January 1959), 34-38.

[2] George C. Watt, Richard M. Hammer, and Marianne Burge, *Accounting for the Multinational Corporation* (Financial Executives Research Foundation, 1977), 166-67.

tance and observance. Within the first of these goals is the qualification to formulate basic rather than detailed standards. Paragraph 10 of the *Preface to Statement of International Accounting Standards,* published by the IASC in 1975, states:

> . . . it is the intention of the IASC . . . to concentrate on basic standards. It will therefore endeavor to confine the International Accounting Standards to essentials and not to make them so complex that they cannot be applied effectively on a worldwide basis. . . .[3]

The second goal was further elaborated in an agreement by member accounting institutes to use their best endeavors to:

1. Ensure that published accounts comply with these standards or that there is disclosure of differences;
2. Persuade governments, securities markets, and the business community that published accounts should comply with these standards; and
3. Ensure that auditors report differences from these standards.[4]

Are these goals being met? In the next section, the authors examine three topics considered by the IASC: depreciation, the equity method, and foreign currency translation. Each is different in the points raised as to the effectiveness of the IASC, but none is a special case. These three subjects provide reasonable examples of the degree of acceptance of IASC standards throughout the world.

**Depreciation**

The standard on depreciation (IAS No. 4) was chosen because it was relatively noncontroversial and was one of the earliest standards issued, becoming effective January 1, 1977. IAS No. 4 is a prime example of the approach initially taken by the IASC to address those issues that would most likely be accepted first. Greater acceptance would be found for standards on which a consensus could be achieved among the members of the voting committee. Other countries would find adoption fairly easy, and the IASC would gain more influence and credibility as a standard-setting body.

This standard seems ideal for meeting the goal of setting basic general principles, yet the IASC initially fell into the trap of being too specific and narrow in its prescribed choices. The exposure draft chose the straight-line method as preferable and called for disclosure of any differences in income attributable to using a

[3] International Accounting Standards Committee, *Preface to Statements of International Accounting Standards* (1974), par. 10.
[4] Watt, Hammer, and Burge, *Multinational Corporation.*

different method. This went beyond the requirements of any national professional body and was quickly eliminated.[5]

The final statement is general in its requirements, calling for depreciation of assets charged to income in a systematic fashion over the life of the asset. Depreciable cost is historical cost less estimated salvage. Disclosures of method, depreciation expense, and both the gross amount of the assets and the accumulated depreciation are mandated.

In analyzing the effect of IAS No. 4 on worldwide practice, two questions are important. First, does practice conform to the standards of the IASC? Second, has practice *changed* to reflect the new standard, or does practice conform for other reasons, such as existing local legislation? To help answer these questions, we referred to a study by Price Waterhouse International.[6] Sixty-four countries were surveyed, including thirty-three that are members of IASC. Practice in the surveyed countries on 267 reporting practices was classified into categories of acceptance, ranging from "Required" to "Not Permitted."[7]

These data cannot be used to measure conformity exactly, for many reasons. First, at least ten IASC member countries were not included in the study. Generalizations of practice in these countries cannot be drawn, for they include such diverse nations as Yugoslavia, Israel, Bangladesh, and Finland. Second, the survey covered practice as of January 1979, only two years after IASC No. 4, possibly not allowing enough time for the countries which may have been in the process of changing standards. Third, categories, such as "Required" and "Insisted Upon," always lead to arbitrary classifications by respondents who perceive the definitions of the groups in different ways. Despite these flaws, the study is valuable for providing a general overview of acceptance; it represents the most comprehensive collection of worldwide accounting practices available.

In all but five of the countries surveyed, depreciation charges to income are the predominant practice and the minority practice in those five. Of the IASC members surveyed, all except Jamaica

[5] International Accounting Standards Committee, "Accounting for Business Combinations," *Exposure Draft* (1976).

[6] R. D. Fitzgerald, A. D. Stickler, and T. R. Watts, eds., *International Survey of Accounting Principles and Reporting Practices* (London: Price Waterhouse International and Butterworths, 1979).

[7] In order of their level of acceptance, these categories are "Required," "Insisted Upon," "Predominant Practice," "Minority Practice," "Rarely or Not Found," "Not Accepted," and "Not Permitted."

and Portugal either require depreciation or insist upon it for an unqualified auditor's report; in these two countries, it is standard practice even though not mandatory. Quite obviously, the IASC tread on no toes by advocating depreciation charges. A slightly more stringent requirement of IASC No. 4 is the need to reflect salvage value in the estimated charges. Of the countries surveyed, only 37 percent require or insist on the consideration of salvage, even though another 16 percent indicate this as the predominant practice. (Actual figures are presented in exhibit 1.) The situation is slightly better for IASC member countries: 58 percent require or insist upon consideration of salvage, and an additional 12 percent say it is the majority practice.

These data may appear to give credence to the belief that IASC standards are being adopted in the member countries, but this assumption fails after an analysis of the source of the standards in the countries reporting high compliance. Exhibit 2 presents the analysis of countries by category and by membership in IASC. The most striking point of the IASC members reporting at least predominant practice is the number of recent former British colonies on the list. When they are removed, the only remaining nations are Japan, France, Korea, Mexico, the Netherlands, and the United States. The British established sophisticated accounting procedures throughout the empire years before the IASC was formed; eight of the former colonies cite IAS No. 4 as their authoritative source rather than credit the British systems installed years ago. Of the remaining nations, Japan, the Netherlands, and

**Exhibit 1. Countries Reflecting Salvage Value in Determining Depreciation Charge**

| | Total survey | | IASC members | |
|---|---|---|---|---|
| | Number | Percent | Number | Percent |
| Required | 18 | 28 | 17 | 52 |
| Insisted upon | 6 | 9 | 2 | 6 |
| Predominant practice | 10 | 16 | 4 | 12 |
| Minority practice | 22 | 34 | 8 | 24 |
| Rarely or not found | 8 | 13 | 2 | 6 |
| Total | 64 | 100 | 33 | 100 |

**Source:** Table 58, Price Waterhouse Survey.

**Exhibit 2. Consideration of Salvage — By Country**

ISAC members

Required
Australia
Fiji
France
Hong Kong
Ireland
Korea
Malaysia
Mexico
Netherlands
New Zealand
Nigeria
Pakistan
Singapore
Trinidad and Tobago
United Kingdom
United States
Zimbabwe/Rhodesia

Insisted upon
Canada
Jamaica

Predominant practice
India
Japan
South Africa
Zambia

Minority practice
Belgium
Denmark
Germany
Norway
Philippines
Portugal
Spain
Sweden

Rarely or none
Brazil
Greece

Other countries

Required
Bahamas

Insisted upon
Bermuda
Botswana
Dominican Republic
Venezuela

Predominant practice
Argentina
El Salvador
Jersey
Kenya
Nicaragua
Taiwan

Minority practice
Bolivia
Chile
Colombia
Costa Rica
Ecuador
Guatemala
Honduras
Iran
Italy
Malawi
Panama
Paraguay
Switzerland
Uruguay

Rarely or none
Austria
Ivory Coast
Morocco
Peru
Senegal
Zaire

**Source:** Table 58, Price Waterhouse Survey.

the United States take pride in their accounting independence; Korea and Mexico were influenced directly through trade ties with the United States; France, which credits the IASC standard, is actually strictly governed by its uniform Plan Comptable. Among those countries where consideration of salvage is a minority practice or not seen at all are eight European countries; four are members of the European Economic Community (EEC). While IAS No. 4 was not enough to convince them to change their ways, these four, with Spain and Portugal, upon their entrance into the EEC in the 1980s, will need to consider salvage value when the EEC's Fourth Directive is incorporated into the national law. As for Brazil, with

hyperinflation, one understands the reluctance to estimate future salvage value in terms of present dollars.

What does this exercise indicate of the depreciation standard? Simply based on this analysis, several points can be made:

1. The IASC succeeded in identifying and codifying standard practice in much of the world.
2. The IASC did not succeed in influencing practice in either its member countries or nonmember countries listed in the survey.
3. In this case, practice correlates somewhat to the IAS standard in terms of considering salvage value, but practice is based on previous standards.

**The Equity Method**

The equity method of accounting for minority-owned intercorporate investments is a much more controversial subject than the need to depreciate fixed assets. In the United Kingdom and United States, the equity method is required for investments where significant influence exists, generally defined as from the 20 to 50 percent ownership levels. Because the investor is considered to have such influence that dividend policy could be affected, dividends are considered as a return of capital, reducing the investment instead of increasing income. Profit or loss from the investment is counted as the ownership percentage of the associated company's profit or loss.

Practice in the United Kingdom and the United States is almost identical to the requirements of IAS No. 3, the statement on consolidations issued in 1976. This is not surprising, for the equity method is singularly suited to a reporting environment which emphasizes the investor. It attempts to measure the value of the investment, rather than only the immediate proceeds of the investment. This is also the controversial point as to its use. The equity method raises issues of the realization of profits and losses. Particularly in those countries where tax reporting is based on financial reporting, claiming profits and losses which have not been realized in a more concrete sense is not considered acceptable.

The equity method is a controversial topic, unlike depreciation. Its use has increased dramatically in the last ten years as more countries have accepted or legislated stricter requirements for financial relationships between companies. This is an area where the IASC has had a great opportunity to influence evolving practice. The Price Waterhouse (PW) study shows results similar to the depreciation issue. A brief review of the percent of countries using

the equity method is presented in exhibit 3. The same country-by-country analysis could be done as with the salvage issue.

Much more interesting analysis of this issue can be made by considering individual countries which have adopted the equity method within the past five years (or are in the process of adopting it).

The PW study lists Japan as an IASC member with minimal acceptance of the equity method. This is changing rapidly; in the years since the PW study was undertaken, the classification has probably reached "predominant practice." This is not in response to IAS No. 3 but to new securities legislation. The growth of the stock market in Japan has led to new and more detailed securities laws, one of which required consolidated statements after April 1, 1977. The same regulation called for the equity method for 20 to 50 percent investments but allowed an interim period during which companies can change from the cost method. The Japanese have stated that their primary impetus for changing standards is to conform to foreign securities markets' requirements.[8]

Germany is an entirely different case and a classic example of the influence of taxes on financial reporting. In Germany, use of the equity method is not allowed. However, Germany is included here as an example because, within the next five years, the equity

**Exhibit 3. Countries Using the Equity Method for Significant Investments**

| | Total survey | | IASC members | |
|---|---|---|---|---|
| | Number | Percent | Number | Percent |
| Required | 19 | 30 | 14 | 14 |
| Insisted upon | 1 | 2 | 0 | 0 |
| Predominant practice | 4 | 6 | 2 | 6 |
| Minority practice | 12 | 19 | 7 | 22 |
| Rarely or not found | 21 | 32 | 5 | 15 |
| Not permitted | 7 | 11 | 5 | 15 |
| Total | 64 | 100 | 33 | 100 |

**Source:** Table 103, Price Waterhouse Survey.

[8] Organization for Economic Cooperation and Development, *International Investment and Multinational Enterprises: Accounting Practices in OECD Member Countries* (1980), 194.

method will be required procedure. This dramatic reversal will result from the implementation of the Seventh Company Law Directive of the EEC. The Seventh Directive requires use of the equity method when significant influence exists; therefore, Germany will need to change to a method of which many Germans have severe reservations.

Another EEC country changing its methods is Denmark, which traditionally had conformity between tax and financial reporting, but which has separated the two completely in the last decade. The PW study lists the equity method as rare in Denmark, but this is now inaccurate. Although the equity method is not yet required, its use is increasing, and in an interesting way. To cope with the problem of recognizing income, the Danes have modified the equity method, transferring the ownership percentage of profit and loss to a reserve account in owners' equity instead of the income statement. This does not conform to IAS No. 3 and will change when the Seventh Directive is implemented.

The last interesting example is Italy. The PW study lists Italy as a country where use of the equity method is rare. This is true, but it has existed, although it is not allowed for tax purposes. Many companies have voluntarily been presenting consolidated statements and using the equity method experimentally. No longer will this be voluntary. A move is under way by the new national stock exchange commission to require large listed companies to consolidate accounts. Most companies will probably follow rules advocated by the new accounting organization, ASSIREVI. These rules are quite openly based on U.K. and U.S. principles and include use of the equity method. The reason for this is the influence of the "Big 8" accounting firms in Italy, which began by auditing U.K. and U.S. subsidiaries, but whose work has expanded to include a large percentage of Italian firms.

In comparing the IASC and the equity method, we should make several points:

1. The IASC has succeeded in identifying and codifying practice which is predominant in investor-oriented countries and, since that is the growing trend, it has succeeded in advocating increasingly popular practice.
2. In countries where the equity method has recently been adopted, there are equally compelling reasons other than adherence to IASC No. 3. These reasons concern securities legislation, compliance with legal requirements imposed through community organizations

such as the EEC, cooperation with trading partners, and the influence of the United Kingdom and United States.
3. The IASC has not greatly influenced either member or non-member nations to adopt the equity method.

**Foreign Currency Translation**

The last area is the turbulent topic of foreign currency translation. A chronology of statements on foreign currency translation by the three major parties involved in the controversy is interesting. Without attempting to explain the major methods involved, the chronology of important events follows. Statement No. 8 by the Financial Accounting Standards Board (FASB) in 1975 called for the use of the temporal method and immediate recognition of gains and losses on translation. This was bitterly opposed by companies which found their earnings shifting dramatically due to currency swings.

In 1978, the IASC issued ED 11, which was basically all things to all people. It allowed a choice between the temporal method and the closing rate method and allowed various alternatives as to recognition of translation gains and losses through both the income statement and direct movements to owners' equity. These choices were allowed even though the known preferred alternative of the majority of IASC members was the closing rate method. Why was the IASC hesitant to take a stand? Unlike depreciation, and even unlike the equity method, foreign currency translation is so emotionally charged that it actually renders the IASC somewhat powerless. The two major powers, the United Kingdom and the United States, were almost diametrically opposed in philosophy at that time, and any stand by the IASC would have been certain to contravene accepted practice in one of the two countries.

At approximately the same time, the Accounting Standards Committee (ASC) of the United Kingdom released ED 21 on the topic of accounting for foreign statement translation. Discussion leading to ED 21 was almost unanimously in favor of the closing rate method, yet the ED allowed the choice of either the temporal method or the closing rate method. Many British experts felt at the time that it would be difficult to adopt a method contrary to the U.S. method when the IASC was flexible enough to allow both.

The controversy continued, fueled by the decision of the FASB to re-evaluate foreign currency translation. A task force was established, and the IASC was represented at each meeting. Subsequently, the FASB issued Statement No. 52, requiring the current

rate (closing rate) method in all but exceptional cases. The advocacy of the current rate method could be seen as a victory for the IASC in some ways. The extent of its influence is difficult to judge, however, for the major influence was obviously the American business community. The FASB has shown little inclination to do more than consider international standards briefly in setting U.S. standards.[9] No doubt the FASB was influenced somewhat because the major trading partners of the United States were strong proponents of the current rate method.

An analysis of the IASC role in the foreign currency issue is difficult because of the other factors involved. It is easy to state that the IASC exhibited weakness in its failure to issue a standard advocating the current rate method. Whether or not the IASC was influential behind the scenes is unknown. The FASB task force meetings and open hearings held on the subject indicate only cursory attention to international standards.

**Impediments to IASC Effectiveness**

Earlier in this paper, the authors presented the aims of the member institutes' individual efforts to achieve the acceptance of IASC standards. The extent to which compliance has been achieved was categorized by the IASC into three areas in a discussion paper titled "Acceptance and Observance of International Accounting Standards."

1. Those countries where IASC standards are awarded the same status as domestic standards. (Mandatory compliance)
2. Those countries where accountancy bodies have declared support for IASC standards and advise disclosure of any areas where local standards differ from international standards. (Preferable compliance)
3. Those countries where no formal status of standards has been determined. (None or accidental compliance)

Few countries fit the first category, although the Bahamas, Figi, Malaysia, Nigeria, Pakistan, Singapore, Trinidad and Tobago, and Zimbabwe come very close. A number of countries, particularly those with long established standard-setting mechanisms, fit the second category. These include the United Kingdom, Canada, and, to a lesser extent, the United States. Many more countries comprise the latter category.

[9] In early 1982, a vote was taken among the FASB and its constituency as to the most important problems requiring the board's consideration. The need for international standards ranked near the bottom on a list of over thirty subjects.

**Lack of enforcement.** A primary impediment to the IASC's effectiveness is its lack of enforcement powers. The IASC depends on voluntary compliance and the influence of the accounting institutes in each country to achieve incorporation of its recommendations into local standards. Despite the goals of these institutes, there is little evidence that much has been achieved.

In 1980, the Organization for Economic Cooperation and Development (OECD) published a survey of accounting practices in member countries.[10] The OECD lists among its members seventeen IASC members, comprising most of the "developed" world, and eight of the founding countries of the IASC. The survey included a question concerning the degree of flexibility existing in each country for accommodating recommendations on standards from international bodies. Of the eight IASC founders, only respondents from the United Kingdom and Ireland stated that IASC standards would be followed. Much more common were responses such as that of Germany: "International recommendations can be taken into account as far as they are compatible with existing legal provisions." Of the twenty OECD nations surveyed, fifteen expressed the view that international standards were often considered when local decisions were made, but that they were overridden by national concerns, particularly where accounting standards are actually enacted into law. Austria and Switzerland, nonmembers of IASC, claim no efforts to consider IASC standards, and France states that its national law goes beyond (and therefore includes) IASC standards, a debatable statement.

The IASC depends on others for its enforcement. Often these other parties are ineffectual in achieving compliance. Even in the United Kingdom, where the ASC has announced its intention to harmonize U.K. standards as far as possible with the IASC's statements, differences remain. A comparison of U.K. accounting practices with international standards produces a list of divergent requirements in at least seven of the first thirteen subjects addressed by the IASC.[11] In the United States, representation on the IASC is through the American Institute of Certified Public Accountants (AICPA) instead of the FASB. No longer does the AICPA have direct power over standard setting; therefore, it must attempt to influence adherence with international standards indirectly through opinions addressed to the FASB and the AICPA membership.

[10] Organization for Economic Cooperation and Development, *International Invest-[illegible]*, 19[illegible]

[11] Arthur Young International, "The United Kingdom," *World Business Reports* (AYI, 1981), 24, exhibit 9.

**Other international bodies.** An additional problem with setting international standards concerns the number of organizations which have decided to consider the subject. These groups represent diverse constituencies and include international organizations, such as the OECD and the United Nations (UN), and regional standard-setting groups such as the EEC.

The OECD and UN can be loosely typified as representing the "developed" and "developing" world, respectively. Each has recently compiled a code of behavior for multinational firms, including rules for reporting. Each must also rely on voluntary compliance. Their primary difference is their emphasis; standards applicable to industrialized nations are not necessarily appropriate for nations in the early stages of development.

In contrast, the EEC is not forced to rely on voluntary compliance. All member countries must pass national laws to include requirements complying with EEC company law directives, several of which include detailed accounting rules. Although regional in nature rather than worldwide, the EEC efforts are the most significant in terms of world harmonization because of the consensus required in choosing standards, the vast differences in the countries involved, and the agreement to make regional standards national law.

The combination of UN, OECD, IASC, and EEC efforts is often confusing and appears unnecessasry to many people. The IASC is hindered in not being the only recognized world authority, for how can there be more than one international standard?

### IS THERE A BETTER ROLE FOR THE IASC?

To answer this question, it is necessary to examine the present objectives of the IASC in comparison to the areas where they have been most and least effective. The two objectives were stated earlier as (1) to formulate basic standards and (2) to promote worldwide compliance with these standards.

In this paper, the case has been made that the IASC has had great difficulty in meeting the second objective. It has not been successful in either changing existing rules or in achieving compliance with new standards. It has been hindered by a lack of authority, a tendency to emphasize details, and questionable support from member nations intent on protecting local interests.

There are some areas, however, where the IASC has been influential. An examination of these areas provides a starting point to define a new role for the IASC more in keeping with the present

stage of the international harmonization process, and which would be more realistic. The IASC has been effective in three major ways:

1. It has succeeded in identifying and codifying the most generally accepted principles in use in the developed nations of the world.
2. Its standards have provided a neutral source for countries in the process of standard setting.
3. The most effective way of influencing world harmonization has been through the IASC's ability to have its standards considered by other, more powerful groups.

The first point correlates closely to the first objective of the IASC: to formulate basic standards. To date, the standards have represented practice in the industrialized world with an emphasis on investor-oriented societies. The IASC should continue to codify the best of present practice in statement form but should expand this role to one which includes research as to how different standards are suitable to different reporting environments. Little work has been done in this area; the IASC could serve as a non-affiliated clearinghouse for efforts to determine the best principles applicable to countries in different stages of development. This research should include the suitability of basic principles such as revenue recognition and matching to different political and industrial environments.

The second way in which IASC standards have proven to be effective has been as a reference for nations and companies needing neutral sources. Earlier, it was stated that many former British colonies refer to IASC standards rather than to U.K. standards as their source of practice. This is not a trivial role for the IASC to endorse for itself. Not all countries are as willing as Italy to adopt American or British standards openly as their own, yet many need an outside source to help legitimize choices of principles. IASC standards should serve as basic models which local standard-setting bodies can use as benchmarks to evaluate existing practice. They should provide guidance in areas where local standards have not yet been formulated. A further need would be served by giving multinational corporations a reference point to deal with numerous divergent reporting requirements.

The IASC has been most effective when it has been able to obtain endorsements for its opinions by parties having greater enforcement powers. Although IASC standards are not recognized as law in many countries, they are endorsed by the International

Federation of Stock Exchanges, which has the power to require adherence to IASC rules by companies listed on the major exchanges of the world.[12] The IASC lobbies to have its standards considered by the FASB and ASC, and its power to influence EEC law directives is considerable. This suggests that working toward the adoption of IASC standards should be secondary to working toward the incorporation of IASC principles into national standards. The IASC should assume the role of consultant to those groups which *do* have powers of enforcement.

## SUMMARY

This paper has examined the role of the IASC. Given the assumption that the harmonization of standards is a worthwhile goal, the IASC was evaluated in terms of its ability to date to achieve its stated objectives. This analysis leads to conclusions that the IASC has not succeeded in changing existing standards or setting new standards. It has succeeded in codifying generally accepted practice, in serving as a neutral source for standards, and in influencing groups with enforcement powers. These successes indicate that the IASC objectives should be changed to the following:

1. To serve as a research clearinghouse to study the effects of different principles in different reporting environments.
2. To provide a neutral model of possible standards for countries in the process of standard setting and for multinational firms dealing with divergent regulations.
3. To provide temporary standards to fill the void existing before local standards can be set.
4. To serve as a consulting body for organizations in the standard-setting process.
5. To channel efforts to influence harmonization to incorporation of IASC principles into local legislation rather than to adoption of IASC standards themselves.

The national differences preventing immediate worldwide harmonization of standards may disappear more quickly than many people think. The primary impetus will probably come from companies themselves. As more firms seek to raise funds in world securities markets, they will be forced to change standards to meet filing requirements. Such de facto harmonization may thus succeed in eliminating present barriers preventing worldwide cooperation.

[12] Fitzgerald, Stickler, and Watts, *International Survey.*

By providing a more research- and consulting-oriented role, the IASC will have a greater opportunity to influence the eventual content of international accounting standards.

## ADDITIONAL REFERENCES

Fantl, Irving L. "Case Against International Uniformity." *Management Accounting* (May 1971):13-16.

International Accounting Standards Committee. "Accounting for Business Combinations." *Statement of International Accounting Standards No. 3* (1977).

______. "Accounting for Depreciation." *Statement of International Accounting Standards No. 4* (1977).

______. "Foreign Currency Translation." *Exposure Draft* (1978).

# *Dispelling Arguments against International Accounting Standards*

M. J. AITKEN and M. A. ISLAM*

Most writers agree that differences in environments and institutional arrangements among countries constitute significant deterrents to the development of international accounting standards.[1] The same writers seem divided, however, as to whether such differences completely preclude the development of a set of uniform and effective standards which will transgress national boundaries. While alluding to environmental differences to indicate the obstacles posed by their existence, some believe that these obstacles should, and in fact can, be overcome. Hall, for example, refers to the difficulty which differences in legal, political, and cultural barriers have on the establishment of international accounting standards but concludes that ". . . pressures for achieving inter-

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[1] See, for example, Gerhard G. Mueller, *International Accounting* (New York: Macmillan, 1967), and "Accounting Practices Generally Accepted in the United States versus Those Generally Accepted Elsewhere," *International Journal of Accounting* (Spring 1968): 91-103; Edward Stamp, "Uniformity in International Accounting Standards — A Myth or a Possibility," *The Jerusalem Conference of Accountancy* (Israel: The Institute of Certified Public Accountants, 1971), 157-66; A. J. Enthoven, "Standardized Accounting and Economic Development," *CA Magazine* (December 1973): 57-60; M. K. Oldham, *Accounting Systems and Practices in Europe* (Epping, England: Gower Press, 1975); Irving L. Fantl, "Frustrations Facing Accounting Uniformity," *Accounting Forum* (May 1976): 27-31; W. D. Hall, "Establishing Standards for International Financial Reporting" in *Accounting Research Convocation* (University of Alabama, 1978), 95-106; A. K. Mason, *The Development of International Financial Reporting Standards*, Occasional Paper No. 17 (Lancaster, England: University of Lancaster International Centre for Research in Accounting, 1978); and Werner G. Frank, "An Empirical Analysis of International Accounting Principles," *Journal of Accounting Research* (Autumn 1979): 593-605.

national financial standards are so great, and will become even greater, that they will ultimately overcome the problems in achieving them."[2]

By way of contrast, however, others feel that because environmental conditions are so varied (among countries), there is doubt as to whether the development of a set of effective international accounting standards is possible. Mueller, for example, states:

> If we accept that (1) economic and business environments are not the same in all countries and (2) a close relationship exists between economic and business environments and accounting, it follows that a set of generally accepted accounting principles cannot be useful in all countries.[3]

The impetus for this paper comes from this latter view. If this view is found to be correct, it suggests that all efforts to establish international accounting standards should end and, similarly, any hope for internationally relevant and comparable financial data on companies should be abandoned. Our study could develop in one of two possible directions. Either we must seek to explain why international accounting committees persist in trying to attain the impossible, or we must show why those, like Mueller, who maintain that this task is impossible, are wrong. The latter is our chosen direction.

To the best of our knowledge, Mueller was the first to propose this hypothesis. He articulately argues for international diversity of practice referring to twelve environmental and institutional "variables" among countries. These included discussion of (1) relative stability of the currency account; (2) degree of legislative interference in business; (3) nature of business ownership; (4) level of sophistication of business management; (5) differences in size and complexity of business firms; (6) speed of business innovation; (7) presence of specific accounting legislation; (8) stage of economic development; (9) type of economy involved; (10) growing pattern of an economy; (11) status of professional education and organization; and (12) general level of education and tool processes facilitating accounting.[4]

That Mueller's work has become a common and accepted source of reference is evidenced by the inclusion of many of his "variables" in the works of subsequent writers, notably Previts and Frank.[5]

[2] Hall, "Establishing Standards," 106.

[3] Mueller, "Accounting Practices," 96-97. See also Mason, *Financial Reporting Standards*, 23.

[4] Mueller, "Accounting Practices."

[5] Gary J. Previts, "On the Subject of Methodology and Models for International Accounting," *International Journal of Accounting* (Spring 1976), 1-12; and Frank, "International Accounting."

We examine these twelve variables to ascertain whether differences in any of them call for different accounting standards in different countries. For the purpose of this examination, these twelve factors are grouped into three broad categories: (A) factors associated with the broader economic environment (factors 1, 8, 9, and 10); (B) features of business organizations (factors 3, 4, 5, and 6); and (C) institutional factors (factors 2, 7, 11, and 12). This taxonomy has been used for two reasons. First, we believe that there are three basic conclusions which may be attached to the twelve stated objections to the development of international accounting standards. Secondly, while there has been and will be other specific objections raised, as far as each objection can be classified under one or another of these categories, the objection is subject to one or another of the three general conclusions which we provide.

## (A) BROADER ECONOMIC ENVIRONMENT

### Relative Stability of the Currency of Account

Mueller argues that "significant currency instability calls for some form of price index adjustment, *with the form of adjustment depending largely on the type of indexes available and reliable*" (emphasis added). However, given no indication as to how the availability and reliability of indices preclude the development of internationally appropriate standards, one is uncertain how differences in the availability and reliability of statistics can have a bearing on a general rule of action (standard). If a uniformly constructed statistic, such as the Consumer Price Index, is not available, this may indeed point to differences in standards underlying the gathering of statistics. It does not constitute an impediment, however, to general rules of action (standards) in accounting, such as the five fundamental rules of continuously contemporary accounting.[6] This is so because statistics only help achieve the job dictated by accounting and auditing standards. At best, Mueller's comments refer to the problem of numerical approximation, which is a different question.

### Stage of Economic Development

Mueller argues that the accounting standards appropriate to a particular country depend on the stage of economic development reached in that country. This argument seems confused. By focusing on the relative economic achievements of nations, it overlooks the similarities in business entities in various countries, developed or

[6] R. J. Chambers, "Inflation Accounting in New Zealand," *Occasional Paper 24* (Faculty of Business, Massey University, 1977), 20.

underdeveloped. These similarities include the facts that businesses everywhere buy and sell in markets, own assets, borrow and lend money, buy and sell for cash and on credit, employ people, and pay taxes. Universally, their survival and prosperity depends on two factors: maintaining solvency and earning profits.

No reason is apparent as to why accounting standards cannot be developed to measure the financial performance and position of companies without reference to the stage of economic development reached by a country. The economies of India and Indonesia are much less developed than that of the United States. But this, in itself, does not suggest that the rules of measurement for assets, liabilities, or any other element of financial statements applicable for an Indian or Indonesian company should be different from those of an American company.

#### Type of Economy Involved

Mueller asserts that accounting standards should vary among countries in accordance with the extent to which a particular country relies on agriculture, mining, manufacturing, trade, or financial institutions. Once again, he provides no specific reason in support of his position. Our position is that heavy reliance on one or two sectors should not necessarily result in varying standards among countries. For example, the economies of the United States and United Kingdom are well diversified: almost all of the sectors are developed. If they can have, within their countries, generally applicable standards, such standards should also be applicable to countries with emphasis on one or two sectors. On the other hand, if the diversified economies have differing standards for specific sectors, some industry-specific standards would be applicable to the country which has only one or two sectors developed.

#### Growing Pattern of an Economy

Mueller argues that some accounting standards should vary, depending on whether an economy is a growing, stable, or declining one: "If growth and expansion are typical, the capitalization of certain deferred charges is more feasible than under stable and declining conditions."[7] In addition to not defining "more feasible," his argument seems to overlook an important point. While we are not concerned here with the case for or against capitalization of deferred charges, the oversight in the argument is indicated by noting that in a growing economy, firms may be both growing and declining. Therefore, the growing, stagnating, or declining trend

[7] Mueller, "Accounting Practices," 99.

in an economy is generally irrelevant to the determination of accounting standards directed to the measurement of performance and position of individual entities.

### (B) FEATURES OF BUSINESS ORGANIZATIONS

#### Nature of Business Ownership

Mueller argues that accounting standards in a country with widespread ownership of company shares need to differ from those of another where shares are predominantly family owned. The argument does not seem to withstand criticism. Shareholders are by no means the only group for which financial statements are prepared; there are other groups, such as creditors, government, employees, and customers. Since solvency, profitability, and gearing are aspects of the company in which all these parties are interested, it follows that the information needs of these parties are essentially similar.[5] Even if a difference, in terms of how widely their respective shares are held, exists between companies, information needs of other parties common to both types of enterprises would require information of a comparable quality and quantity to be supplied in the financial statements. This may be one of the reasons why separate accounting standards have not been developed for the family-owned companies.

#### Level of Sophistication of Business Management

Mueller argues that when the sophistication of management personnel varies among countries, accounting standards would also necessarily vary, that is, become more sophisticated or complex. While management sophistication may be important for the companies managed, however, it can be argued that company financial statements are not the proper place for a reflection of management's cognitive and analytical capabilities, although some might indeed be so used under present conditions.

Accounting standards, as we have portrayed them, are applicable to the measurement of profit, the valuation of assets, and the representation of companies' financial performance and position, in a form understandable and usable by non-experts. What is important is the factual quality of the data, not the complexity of the standard; complexity gives no guarantee of the serviceability

[5] For empirical confirmation of this, refer to R. J. Chambers, *The Design of Accounting Standards*, Monograph No. 1 (University of Sydney Accounting Research Center, 1980).

of information. From a national point of view, companies may also vary in terms of management sophistication; this does not prohibit the applicability of common accounting standards.

#### Differences in Size and Complexity of Firms

Mueller argues that large and complex organizations require accounting standards different from those of small and less complex organizations. Although no indications are given as to what constitutes a big and complex organization compared to a small and less complex one, he states by way of example that heavy advertising and research and development outlays by big and complex firms require "recognition" (which presumably means capitalization), while smaller programs in similar firms may need to be expensed. It is not stated why there should be this difference in treatment, but such a situation has some interesting implications. While in the past it has been accepted that the size of a firm could be determined with reference to its asset holdings, Mueller seems to imply now that an asset is to be determined with reference to the size of a firm, placing us in something of a "catch 22" situation.

Notwithstanding the unnecessary complications Mueller introduces with this point, that an answer to the apparent problem of size and complexity closely parallels that discussed under the heading "Stage of Economic Development" should be noted. To reiterate briefly, he states that business entities everywhere make similar decisions to buy and sell goods, own assets, and the like. While there is no implication that every element in a decision will be similar, a number of the elements will be. To the degree they are, we regard the information needed for those decisions as within the domain of accounting information. Insofar as they are not, they are outside the domain of accounting. Thus, we establish accounting information as a necessary but by no means total factor in a decision process for all firms, large and small.

#### Speed of Business Innovations

Mueller further argues that practices such as engaging in business combinations, stock distributions, and leasing of assets are found in some countries and not in others. Therefore, countries in which such practices exist require accounting standards not needed in countries in which they do not. However, this argument does not really state anything against uniformity. After all, uniformity involves similar treatment of common accounting items only. International uniformity regarding items such as those previously mentioned would require similar treatment by the countries where a

particular problem exists; there is no need to be concerned with the countries which do not have the problem. In any case, the phenomenon is not peculiar to the international context. In a national situation also, not all companies lease assets, form combinations, or distribute stock dividends, and this in no way implies that national accounting standards are unattainable.

### (C) INSTITUTIONAL FACTORS

#### Degree of Legislative Interference

Mueller proposes that taxation statutes in some countries provide that taxation allowances regarding certain items can be claimed only if they are treated similarly in the company's financial statements. He further argues that even though the accounting methods implied by these requirements may not be adequate in terms of factual representation of the company's performance and position (since adoption or non-adoption of a method in financial statements makes a difference in cash outflow), managements of some companies tend to select the method which minimizes the tax liability without regard to its accounting propriety. Mueller cites as examples (1) the LIFO inventory method in the United States, which, in an inflationary period, results in undervaluation of inventory in the balance sheet, and (2) the Swedish inventory valuation procedures, which are unduly conservative, distorting both the income and inventory figures in the financial statements. In the latter case, a deliberate understatement of inventory from the lower of cost or market basis by 60 percent ordinarily and 70 percent in special cases is permissible.[9] These types of statutory requirements are said to be a part of the accounting environment, and accounting standards should properly vary between countries to accommodate such peculiarities in legislation. Two aspects of these types of legislative interferences should be considered: first, whether the methods induced by them are desirable methods in view of the common information needs of the parties at interest; and, second, how far international standardization is possible given statutes of this nature.

It has been argued that the desirability (soundness) of an accounting method must be determined with reference to the quality of information it yields, that is, whether it satisfies the quality of serviceable information. If it does, it is no hindrance to the

[9] A. P. Amiess, "Developing Nations and Tax Oriented Accounting Principles — The Swedish Model," *International Journal of Accounting* (Spring 1971), 94; and Oldham, *Accounting Systems*, 161.

development of international accounting standards since the method itself will deserve consideration for international application. But some legislative interferences may lead, or have already led, to the creation of undesirable accounting practice. For example, LIFO valuation of inventory does not satisfy the standard of relevance. Since the balance sheet valuation of inventory will be in terms of outdated prices in inflationary periods, this practice fails to comply with the standard of comparability (intercompany) as inventory may be represented in prices of different years. In this instance, the standard of neutrality will also be impaired since the method is selected to serve the interest of some parties and as such yields potentially misleading information to all parties in general. It is obvious that a method such as that for inventory valuation in Sweden meets none of those criteria. Thus, our conclusion is that the mere fact that an accounting practice was induced by a piece of legislation does not make it a valid practice.

When unsound accounting practices are encouraged by some statutory requirements, accountants have an obvious responsibility to report to the authorities concerning the probable undesirable consequences of, and inequities in, such legislation and, thus, attempt to amend the legislation. As long as the laws remain operative and management (and possibly shareholders and creditors) wish to enjoy the financial benefits of such a law, something must be done to supply reliable and relevant information in the financial statements. A practical remedy could be to compute amounts for items affected, following sound methods of accounting (in terms of the previously mentioned cornerstone concepts of solvency and profitability) and to supply such amounts in parentheses or in the notes to the accounts.

The establishment of international accounting standards can also exert pressure to help free accounting practice from the constraints of tax legislation. For example, Sweden, with other Scandinavian countries, is considering bringing its accounting practices more into harmony with those of the European Economic Community.[10] If that happens, the requirements of "true and fair" by the Fourth Directive have the potential of freeing Swedish practice from constraining tax legislation. Therefore, Sweden's membership on the International Accounting Standards Committee will directly discourage the practice in that country of creating secret reserves and writing off inventory in an arbitrary manner.[11]

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[10] Oldham, *Accounting Systems*, 163.

[11] See paragraph 17 of IAS No. 2, *Valuation and Presentation of Inventories in the Context of Historical Costs* (1973).

#### Presence of Specific Accounting Legislation

On this point Mueller argues that because the Companies Act or equivalent statutes are binding, and since those laws are not the same among countries, the accounting standards appropriate for one country may not be so for another. But as far as accounting standards are concerned, the law, in the majority of countries, does not prescribe in detail. Instead, the broad quality of financial statements, such as "fair" or "true and fair" representation, is emphasized. This leaves considerable latitude to develop and select accounting standards by referring to the user's needs and uses of accounting information.

In a small number of countries, the forms and contents of financial statements are prescribed by the relevant laws, such as in France and Germany. But in these countries, the provisions of the laws are also changeable. In Germany, company law was revised in 1965 to bring it much closer to the U.K. and U.S. requirements, and the French Plan Comptable was similarly revised in 1976.[12] Again, these laws are under revision to make them be consistent with the EEC Fourth Directive. It would seem that the institutional differences cannot act as a permanent deterrent to the acceptance of common accounting practices. The aim of any legislation in the commercial arena should be to promote and safeguard the public. This must also be the objective of proper accounting standards.

#### General Levels of Education and Tool Processes Facilitating Accounting

Under this heading, Mueller argues that "statistical methods in accounting and auditing cannot be used successfully where little or no knowledge of statistics and mathematics exists. . . ."[13] This returns us, however, to the argument used to counter Mueller's first proposition regarding currency instability. Without considering whether the degree of skill required by Mueller (but nowhere specified) actually exists, it cannot be too strongly emphasized that statistical methods should only help to perform the jobs dictated by accounting and auditing standards. They are aids, determined independently of the standards. Any discussion of differences in statistical ability and/or the availability of relevant data in various countries does not impinge upon the development of accounting standards. In fact, the reverse holds. Without some aim, here defined as a set of "ideal" international accounting standards, the differences in statistical ability and availability of relevant data will

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[12] See Oldham, *Accounting Systems,* 103-4.

[13] Mueller, *International Accounting,* 150.

never be reconciled. On this interpretation, Mueller's suggestion only makes the development of international accounting standards more urgent.

### Status of Professional Education and Organization

Under this heading, Mueller provides no specific argument to explain why different accounting standards depend on the development of accounting professionalism or the level of general education as he contends. Rather, he asserts that when adopting an accounting standard of foreign origin, the recipient country should modify that standard to suit the local conditions. But in view of the arguments presented here, the necessity for doing so is not apparent.

## CONCLUSION

We have examined the environmental and institutional impediments suggested by Mueller under three broad classifications. This examination questioned Mueller's claims disputing the possibility and usefulness of international accounting standards. In the case of the first classification, namely "The Broader Economic Environment," the variation in these factors was shown generally to be irrelevant in the selection of an accounting method.

Further, the importance which Mueller ascribes to these factors is based on a misunderstanding of the relationship between accounting and the business environment. Mueller's arguments appear to be based on the premise that this relationship between accounting and the business environment is a direct one. Consider, as evidence of this, Mueller's comment:

> Let us postulate for a moment that accounting principles generally accepted in the United States were enforced in all countries of the world. This would create international uniformity which would have some intellectual appeal and would ease many problems in international practice and financial reporting. At the same time such uniformity would lack meaning. We would have to assume that business conditions are the same in all parts of the free world, and that the same stage of professional, social and economic development has reached everywhere.[14]

Although we cannot find fault with Mueller's observations that business conditions are not identical in all countries; that the same stage of professional, social, and economic development has not been reached everywhere; and that a relationship between accounting and the broader environment exists; we question his specification of this relationship as a direct one. This view ignores

[14] Mueller, "Accounting Practices," 97.

the only link between accounting and the broader environment, namely, the business entity. The function of accounting (the object of financial statements) is to measure and communicate the financial performance and position of specific business entities to shareholders, creditors, and other interested parties. Since the environmental conditions in a particular nation influence the financial affairs of a firm, measures of financial performance and position will automatically reflect the relevant environmental influences on the business firm. Thus, the focus for accounting is the entity, not its environment, and many of Mueller's arguments which fail to account for this relationship are invalid.

Concerning the second classification, "Features of Business Organizations," discussion of the various factors (size, complexity, ownership, management caliber) was couched in the context of a market economy. It was concluded that both national and international companies have a common interest in solvency and profitability (and these are the cornerstone concepts of an accounting system which provides necessary but by no means sufficient information for economic decisions). Therefore, a report to interested parties (shareholders, managers, creditors, employees, government) may be designed to include the same elements in financial statements (assets, liabilities, ownership, equity, profit) of all companies. This applies regardless of the individual idiosyncrasies mentioned by Mueller. Therefore, these statements do not require different accounting standards. We qualify our conclusion, however, to recognize that there may be some difference in the *extent* but not the *nature* of public disclosure of information for companies which are privately as opposed to publicly owned. Regardless of this qualification, there is no reason why the measurement methods applied should differ within or among countries.

On the third classification, factors pertaining to institutional differences, institutional and legal requirements were observed to be insignificant when judging the soundness of accounting methods, especially where common user needs are at variance with such practices.[15] Logically, they may, of course, place obstacles in the way of implementing internationally appropriate methods of accounting. In view of the trend toward uniformity of regulation, apparent in the case of member countries of the European Economic Community, however, these barriers can be expected to be

[15] For empirical support of the proposition that there is a common set of user needs, see Chambers, *Design of Accounting Standards.*

progressively weakened. In the meantime, there is nothing to prevent the presentation of information (in parenthetical form), thereby enabling accurate assessments of solvency and profitability. The very act will tend to indicate to regulators the importance of such information.

# *American and Canadian Accounting Standard Setting: A Comparative Analysis*

ROBERT BLOOM*

This paper considers the nature and mechanism of the standard-setting process in the United States and Canada and offers reasons for differences between the two systems.

The Financial Accounting Standards Board (FASB) has been the standard setter in the United States since 1973. Separate and independent of all other business and professional organizations,[1] it is a private organization responsible for formulating and revising principles of financial accounting and reporting. These principles or standards were formally recognized through Accounting Series Release 150 in 1973 as authoritative by the Securities and Exchange Commission (SEC), which, since 1934, has had the statutory authority to set accounting standards. The SEC is the government agency with which publicly owned corporations are required to file reports. For the most part, the SEC has delegated the standard-setting role to the FASB and its predecessors.[2] Publicly owned

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[1] The FASB has its own staff of 125 and has issued eighty standards. Since 1977, the American Institute of CPAs (AICPA) has *not* had veto power over the selection of trustees, who in turn appoint the FASB members. While the AICPA did have such veto power from 1973, when the FASB was created, until 1977, the AICPA never exercised that power.

[2] As the current chief accountant of the Securities and Exchange Commission has observed: ". . . it should be emphasized that the commission doesn't insist that the board [FASB] adopt exactly the same standard that the commission would if it was dealing with the issue. Rather, it considers whether the adopted standard is within a range of solutions acceptable to the commissions. . . ." A. C. Sampson, "A Regulator's View of the FASB: The First 10 Years and After," *Journal of Accountancy* (August 1983), 54.

corporations are required to adhere to FASB standards lest the SEC, which backs such standards, bar such companies from trading their securities.[3]

### ACCOUNTING PRINCIPLES BOARD

Prior to establishment of the FASB, standard setting in the United States was conducted by the Accounting Principles Board (APB), which represented an "arm" of the American Institute of Certified Public Accountants (AICPA), the principal national organization of CPAs in the United States.[4] The APB was a part-time, unsalaried body of eighteen to twenty-one members, each of whom had to be a CPA. It functioned from 1959 to 1973.

### FINANCIAL ACCOUNTING STANDARDS BOARD

In accordance with the 1972 recommendations of the Study Group on Establishment of Accounting Principles (also known as the Wheat Committee), the FASB was created as a private organization, independent of the AICPA and all other organizations concerned with financial accounting and reporting. The APB was part of the AICPA; the FASB is not. The FASB has a much smaller membership and considerable autonomy vis-à-vis the APB. Its funding comes equally from contributions and publication sales. Of the contri-

[3] The primary role of the Securities and Exchange Commission (SEC) is to promote full disclosure of material facts regarding securities offered in public sales. The SEC sets disclosure standards for proxy solicitation, which serves as a mechanism for regulating corporate disclosure. Under its integrated disclosure system, the SEC has fostered improved financial reporting by simplifying disclosure requirements and encouraging a combination of SEC reports and annual financial reports. The SEC oversees the work of the FASB to such an extent that the FASB cannot perform its functions without the SEC's implicit stamp of approval. If the SEC becomes disenchanted with the FASB's performance in developing a standard on a particular issue, the SEC will step into the standard-setting process and has done so in the past on such issues as the investment tax credit, leasing, oil and gas accounting, and inflation accounting.

[4] Prior to the APB, another body within the AICPA was responsible for formulating accounting principles — the Committee on Accounting Procedure (CAP). It was established in 1938 to narrow the alternative standards or policies management could adopt in financial reporting, which was essentially the same charge that was later given to the APB and FASB. Until its function was assumed by the APB in 1959, CAP, which consisted entirely of CPAs mostly in public practice, produced a wide range of accounting research bulletins, fifty-one in total. CAP pronouncements were to be followed based on general acceptance. CAP was superseded by the APB, which was supported by a research staff. Under the APB, research studies were conducted on various issues prior to issuance of opinions or standards. Moreover, in 1964, the AICPA formally required its members to adhere to APB opinions in external financial reports and to report any deviations from such opinions and the underlying rationale for such deviations.

butions, 60 percent are from industry, 40 percent from public accounting.

The FASB has seven full-time members.[5] While none of them is currently required to be a CPA, five of seven are. Three members came to the FASB directly from public accounting. While their backgrounds vary, all are knowledgeable in accounting and business matters. Upon joining the FASB, each member must completely terminate employment in other organizations in order to be considered independent in appearance as well as in fact. The FASB members are selected by the Financial Accounting Foundation, which in turn is composed of members from a number of sponsoring organizations concerned with corporate financial reporting and government accounting. The foundation elects a board of fifteen trustees, twelve for the FASB and three for the new Governmental Accounting Standards Board (GASB). The trustees serve three-year terms and are customarily reappointed for another term. The trustees have the responsibility to appoint members to the FASB, the GASB, and their individual advisory councils, as well as to finance the operations of both boards. The FASB Advisory Council has forty members appointed annually and customarily reappointed only once, reflecting a diverse mix of parties concerned with the scope and quality of financial reporting. The council consults with the board on such matters as project priorities and task force selection — all with a view to serving as a link to the board's constituents.

## DIFFERENCES BETWEEN AMERICAN AND CANADIAN STANDARD SETTING

While the AICPA is no longer the standard-setting body in the United States, the Canadian Institute of Chartered Accountants (CICA) remains as such in Canada. Companies incorporated under the Canada Business Corporations Act (1975) or under certain provincial corporations acts are required to adhere to CICA recommendations in financial reporting. Moreover, the Canadian provincial securities commissions issue national policy statements calling for compliance with CICA recommendations. Companies whose securities are publicly traded are required by their provincial securities commission to follow the CICA *Handbook.*

Whereas the FASB is an independent standard-setting body, the Accounting Standards Committee (AcSC) is an arm of the CICA. While the FASB's 1985 budget is $10 million, the AcSC's is

[5] The FASB chairman earns $225,000 a year; each of the other six members, $200,000.

approximately $500,000 (U.S.). The FASB approach to standard setting may well be too costly for Canada to adopt.

Organized since 1967 by geographic section — eastern, central, and western — to expedite work throughout the country, the AcSC — which has been separated from the CICA Auditing Standards Committee (AuSC) since 1973 — has many striking similarities with the defunct APB. The AcSC consists of twenty-two part-time, unpaid members who are employed by other organizations.[6] It has many of the same characteristics as the APB had. Both the AcSC and APB have consisted of some twenty part-time, unpaid volunteers, who may well have been independent in fact, but have not been independent in appearance. Both boards have had heavy, full-time workloads handled by part-time members. In fact, these characteristics served in large part to "undo" the APB. One must wonder how the AcSC can prevail under similar conditions that undermined the APB. What is suitable in Canada, however, in the realm of standard setting may well be unsuitable in the United States and vice versa, for the two countries have different cultures and traditions.

While all members of the APB were required to be CPAs, only two-thirds of the AcSC members must be chartered accountants. No member of FASB is currently required to be a CPA, although most are (five of seven), whether or not they were previously engaged in public practice. Each member of the FASB and AcSC is an accountant of some sort, even the token financial analysts present in both bodies. One must wonder why both standard-setting bodies do not broaden their membership to include non-accountants. Surely, non-accountants are interested in the scope and quality of financial reporting, and in fact, non-accountants do serve on the advisory councils of both the FASB and AcSC. Moreover, to the extent that the standard-setting bodies engage in policy decision making, no insurmountable problems to having

[6] "Subject to the approval of the Board of Governors, Committee members appointed by the institute will be invited to serve by the Chairman of the Committee after he and the General Director of Research have agreed on those to be asked. Half of the Committee members will be in public practice. Up to six Committee members will be appointed, after consultation with the Chairman and the General Director of Research, by other organizations such as: The Canadian Council of Financial Analysts; the Financial Executives Institute Canada; . . . and the Society of Management Accountants of Canada. Committee appointments will be arranged so that there will be an orderly rotation of new members each year with approximately one-third of the Committee's members changed annually." CICA *Handbook*, "Accounting Recommendations" (December 1983), 11. The Canadian Certified General Accountants Association no longer recommends any of its members to the AcSC.

at least one non-accounting–oriented member serving on each body should be presented.

With respect to the vote required to pass standards, at least two-thirds of AcSC members must agree to do so. The same applied to the APB. It is often difficult to achieve a two-thirds vote, so significant compromises must be made. Only a majority vote of the FASB members (four of seven) is needed to pass a standard.

The CICA has an Accounting Standards Steering Committee, consisting of the AcSC chairman, the chairman of each regional working section, the CICA general research director, and its accounting standards director. The Steering Committee establishes "guidelines" based on a two-thirds vote of its members for dealing with emerging problems, interprets existing recommendations, and publishes material explaining existing *Handbook* statements. Perhaps the FASB should have a similar steering committee.[7] Additionally, since 1974, a broadly diversified Accounting Research Advisory Board (ARAB) consisting of twenty members, mainly non-accountants (including attorneys and educators), each serving a one-year term, has existed in Canada. ARAB meets twice a year. Similarly, the FASB has an Advisory Council of forty members, representing a diversified mix of preparers, auditors, and users of financial reports, which, among other things, suggests topics and priorities for the FASB. The FASB Advisory Council meets quarterly.

The term for FASB members is five years with one possible renewal, which appears to the author to be too long.[8] AcSC members serve a three-year term, with one renewal allowed for a committee member who becomes a chairperson of a working section and later of the AcSC. The term of office for the AcSC chairperson is one year; for each section chairperson, two years. The AcSC term of three years, which seems to be more reasonable than the FASB term of five years, is presumably intended to foster stability, yet also to promote change.

All meetings of the FASB, as well as the Financial Accounting

[7] A counterpart of sorts in the United States to the Accounting Standards Steering Committee in Canada is the AICPA's Accounting Standards Executive Committee (AcSEC). It issues statements of position (SOPs), which are advisory in nature and lack official status. Such statements deal with current issues and are for the guidance of AICPA members. There is also the recently constituted FASB's "New Emerging Issues" Task Force, composed mainly of public accountants, which identifies and screens developing issues.

[8] This term of office was specified in the Wheat Committee Report, calling for the establishment of the FASB. See *Establishing Financial Accounting Standards: Report of the Study Group on Establishment of Accounting Principles* (New York: AICPA, 1972).

Foundation and the Financial Accounting Standards Advisory Council, are open to the public, while the AcSC holds no open meetings whatsoever. Nor does the AcSC hold any public hearings. Even the APB in the twilight of its reign felt pressured to hold public hearings — in 1971, on marketable equity securities, leasing, and oil and gas accounting. The AcSC conducts its operations under a veil of secrecy, which may well be an acceptable practice in Canada. To the extent that "economic consequences" (the impact of accounting standards on the behavior of users and preparers of financial reports) are important to consider in standard setting, which will be discussed later in the paper, "openness" on the part of the AcSC would be desirable.

The FASB circulates its discussion memorandums and exposure drafts to interested parties on its mailing list, soliciting letters of comment at both stages. The FASB sends only form letters to authors of comment letters that it has received (on discussion memorandums and exposure drafts), whereas the CICA periodically publishes in the *CA Magazine* an analysis of the reasons for its standards and, in so doing, indicates the main positions taken by the respondents to the exposure drafts. Neither the FASB nor the AcSC publishes its exposure drafts in its principal practitioner-oriented journal — the *Journal of Accountancy* or *CA Magazine,* respectively — preferring to mail the exposure drafts to interested parties to maximize the number of responses. The AcSC circulates only its exposure drafts to solicit letters of comment; it does not distribute discussion memorandums to the public. Both the FASB and AcSC allow the public to inspect letters of comment.

The FASB indicates in each statement of accounting standard the number of board members who voted in favor of the standard, as well as the names of the members who dissented from the standard and their reason(s). The AcSC does not do that, apparently to avoid giving excessive weight to dissenting viewpoints.[9] However, both standard setters discuss the alternatives and consider the rationale for each alternative in their analyses of the standards.

As for the steps in the standard-setting process in Canada, the Accounting Standards Steering Committee allocates projects to the three sections. Sections to which particular topics are assigned outline problems, propose solutions, and write on various subjects. For each project, the section prepares a "statement of principles" dealing with the issues, alternatives, and the reasoning for each

[9] See "Reorganization of the Institute's Activities," *Canadian Chartered Accountant* (March 1968).

alternative. The statement of principles is then sent to the AcSC associates for response. Each AcSC member is entitled to seek advice from twenty to twenty-five confidential associates. Such associates are carefully selected by each AcSC member and may well be, for example, fellow partners in accounting firms, which may raise questions about the independence of AcSC members.

After the entire committee agrees to the principles, a draft recommendation is prepared by the initiating section; if two-thirds of the committee consent, an exposure draft, which is distributed upon request to interested parties, is prepared. Comments on the exposure drafts are accepted and reviewed. The comments tend to come from large corporations and major accounting firms. Changes may conceivably be made in the exposure drafts in light of the comments received from respondents. In some cases, the AcSC may decide after examining the letters of comment that significant changes are necessary in the exposure draft and may well issue a re-exposure draft prior to formulating a standard. Should a re-exposure draft be prepared, it is circulated before the formal standard is developed.

One must wonder why the AcSC does not rely more heavily on external task forces à la the FASB to expedite the standard-setting processs[10] and why the AcSC does not circulate discussion memorandums or pre-exposure drafts to the public.

The FASB has developed a conceptual framework or constitution of financial accounting and reporting (that is, the objectives, qualitative attributes, and elements) to provide a foundation for formulating accounting standards and to enhance public confidence in the standard-setting process. The AcSC has no such framework of its own[11] and does not rely upon such a framework in the process of formulating accounting standards.[12] Neither did the APB in the United States have a conceptual framework. Canadian standard setting deals with each issue on an ad hoc basis, apparently

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[10] It should be emphasized that there are three external task forces currently working on pensions, not-for-profit, and oil and gas accounting, and reporting to the full AcSC, not to individual sections of the committee. The 1981 CICA *Report of the Special Committee on Standard Setting*, which was chaired by Morley Carscallen, a Coopers & Lybrand partner, recommended the use of external task forces to alleviate the workload of AcSC members.

[11] The CICA conceptual framework project has been in a state of suspended animation ever since the issuance of the report prepared by Edward Stamp, *Corporate Reporting: Its Future Evolution* (Toronto: CICA, 1980).

[12] John Waterhouse, "A Descriptive Analysis of Selected Aspects of the Canadian Accounting Standard Setting Process," *Research to Support Standard Setting in Financial Accounting: A Canadian Perspective*, ed. S. Basu and J. A. Milburn (Toronto: Clarkson Gordon Foundation, Canada, 1982).

using a "crisis-by-crisis," "fire-extinguishment" approach, reminiscent of the APB's method of operation.

The FASB's deliberations are significantly influenced by the perceived economic and political consequences of proposed standards.[13] Little concern for economic and political consequences on the part of AcSC members appears to exist, according to Waterhouse's study. In all fairness, however, Waterhouse conducted his study in 1980, so perhaps the current AcSC members, if interviewed today, would be more concerned as to the economic and political impact of standard setting. The APB's inability to deal with economic and political consequences is thought by many to have led to its downfall.

Emphasis seems to be on the professional judgment and experience of the AcSC members in Canadian standard setting. The AcSC members appear to stress "economic reality" in the process of formulating standards. However, the AcSC's work, like the FASB's, is clearly political in view of the fact that different interest groups "lobby" for different versions of proposed standards.[14]

The AcSC has relied essentially on the research of other standard-setting bodies, especially that of the FASB, to the extent it is concerned with research, although the CICA does undertake a limited number of fact-finding, empirical studies to determine how firms account for various items and the extent of their compliance with CICA standards, and the CICA sponsors a limited number of academic research studies pertaining to issues and controversies in financial reporting.

[13] See Financial Accounting Foundation Structure Committee, "Structure of Establishing Financial Accounting Standards" (Stamford, Conn.: FASB, 1977). The FASB has responded to the issue of economic and political consequences by establishing "due process" procedures, creating an atmosphere of openness in the standard-setting process. Furthermore, the FASB has commissioned several research studies on the economic impact of such standards as leasing, foreign currency translation, and inflation accounting.

[14] In fact, economic and political consequences ensued subsequent to the issuance by the CICA of accounting recommendations for leases (1978), foreign currency translation (1979), and a draft guideline for petroleum incentives program (PIP) grants (1981). Perhaps there are several reasons for the lack of emphasis by the AcSC on economic and political consequences: (1) the AcSC wishes to maintain a sense of autonomy and insulate itself from political pressures and lobbyists; (2) Canadians, as opposed to Americans, have been less inclined to act in an adversarial manner; (3) Canadian standards are generally instituted some time after the corresponding American standards have been adopted, and the AcSC may conceivably be averse to suspend a standard that has already been established in the United States; and (4) a number of major Canadian companies are American owned and adhere to U.S. GAAP.

The FASB, on the other hand, has a significant staff and a large budget for conducting and funding research on particular issues. The AcSC members, according to the Waterhouse study, did not express a compelling need for the AcSC to do much of its own research in the process of setting standards. In fact, the AcSC members in the Waterhouse study did not appear to be concerned about research output, for they asserted that economic reality, experience, and logic are the bases they use in setting the standards.[15]

## CONCLUSION

It might well be asserted that professional accountants and other business people, including the principal users of financial reports, are in a better position than the government to formulate accounting standards with a view to satisfying the presumed users' needs.[16] The Financial Accounting Standards Board was established based partly on that rationale. Recently, dissatisfaction with the FASB has been mounting from various sources to the point of ominous talk about transferring the FASB's function to a governmental agency.[17] It can be asserted, however, that governmental standard setting is really nothing new in the United States. Standard setting is in essence a joint private-public endeavor between the FASB and the SEC, with the latter looking over the former's shoulders. There has also been some wishful thinking that the standard-setting function might be returned to the AICPA,[18] which would be analogous to the Canadian mechanism.

The FASB has been accused by some of being slow to act on important issues and by others of issuing unnecessary and expensive standards. While a change may conceivably be needed in the long term, how significant a change remains to be seen. The question is whether either of the foregoing alternatives — a governmental or professional standard-setting body — among other alternatives would represent an improvement. Returning the standard-setting mechanism to the AICPA could be a return to the days of the

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[15] Waterhouse, "Canadian Accounting Standard Setting Process."

[16] See Appendix.

[17] See L. Berton, "FASB, Which Decides Accounting Questions Sparks Much Criticism," *Wall Street Journal* (30 April 1984), 1, 8.

[18] See A. R. Wyatt, "The Accounting Rule-Making Controversy," in *Annual Accounting Review*, vol. 4, ed. S. Weinstein and M. Walker (Chur, Switzerland: Harwood Academic Publishers, 1982).

APB. While a similar approach functions in Canada, we must remember that American and Canadian cultures are different.[19]

The process of standard setting in Canada could be improved significantly, apart from any major alteration in the current structure, through (1) "opening up" the standard-setting process to the public, by circulating discussion memorandums on proposed standards and conducting public hearings; (2) placing more emphasis on research to be used in the process of formulating the standards; and (3) giving explicit emphasis to the perceived economic and political consequences of proposed standards. Abolishing the AcSC and simply adopting FASB standards on a wholesale basis in Canada is unequivocally not the course of action to take. Canada is a unique country, and it should have its own standard-setting body and its own standards.

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[19] Stamp observes several political, economic, and social differences between the two countries, including:

(1) Canada's parliamentary process is based on the British approach;
(2) Canadians are less likely to lodge lawsuits to solve their problems than Americans;
(3) Canada is more a welfare state than is the United States;
(4) There is greater emphasis on publicly owned corporations in Canada;
(5) CICA standards are supported not only by the federal government but also by various provincial securities commissions;
(6) Many chief financial executives in Canadian organizations are chartered accountants.

See Edward Stamp, "Accounting Standard Setting: A New Beginning. Evolution Not Revolution," *CA Magazine* (September 1980), 38-43.

## APPENDIX

With regard to governmental standard setting, it would probably have two key shortcomings, as Thomas observes:

- Because its members would be keenly aware that they would be writing law — intended to be applied equally to all those affected by it — a government body would inevitably end up detailing how the law was to be applied and interpreted; each new breach of the law, or difference in interpretation, would result in a spate of new, and even more detailed, rules and regulations designed to circumvent the breach or clarify the interpretation. Income tax law is a good example of this process.
- Government employees, through whom the laws would be administered, would lack practical experience in the application of the standards; they could, on occasion, be subject to political pressures and therefore lack objectivity; and, by being insulated from the business and professional worlds they are regulating, they could be accused of lacking either or both sensitivity and timeliness.[1]

Additionally, a former SEC Commissioner has maintained:

The kind of careful, exhaustive and fundamental approach to providing a basic foundation for the standard-setting process, involving the commitment of very substantial resources and the collaboration and involvement of a great many talented persons, is one which would be difficult to duplicate in a government agency. Such an agency might well be concerned, as the SEC often is, with a great many other important issues, and it would be under pressure to produce results quickly while operating within a rather modest budget.[2]

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[1] R. D. Thomas, ed., "Research: Establishing Accounting and Auditing Standards," *C.A. Magazine* (December 1976), 55.

[2] P. A. Loomis, Jr., "The Standards Setting Process and Its Economic Impact" (Paper presented at FASB Economic Consequences Conference, Rye, New York, March 1978), 5.

# *Cost and Management Accounting Practices in New Zealand*

JACK C. BAILES and GRAEME M. McNALLY*

This article reports the findings of a survey which collected information from 62 percent of the publicly listed manufacturing companies in New Zealand. A small (3 million population) but developed English-speaking country, New Zealand has been dominated by its agricultural activities and the export of products from the sheep and dairy industries. Its business and educational environments may be characterized as follows:

1. It recently experienced considerable expansion of secondary industries but with relatively small industrial units. The companies in this survey have total assets from less than $2 million to more than $200 million, with only 48 percent exceeding $15 million in total assets.
2. Its financial accounting standards are very similar to those of the United States.
3. It offers formal education in accounting, including cost and management accounting. Similar to that of the United States, its educational system is concentrated in the universities, usually as part of a three- or four-year undergraduate degree in commerce/business or management. During the last two decades, the use of U.S. texts for cost and management accounting courses has become common.

On balance, N.Z. companies included in this survey are similar to the smaller and medium-sized manufacturing companies in the

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United States. The survey covered four areas of cost and management accounting where the N.Z. companies appear to face the same types of problems and alternatives as U.S. companies. These are (1) product costing; (2) operating budget plans and reports; (3) long-range/strategic plans and capital budgeting; and (4) other management accounting/decision-making techniques. The results of this survey provide an example of the international transferability and utilization of cost and management accounting techniques and practices.

## PRODUCT COSTING

Companies were asked to specify the type of product cost system they used primarily, and to state their methods of applying material, labor, and manufacturing overhead to products. Exhibit 1 summarizes information as to companies using a process or a job-order cost system and the cost-flow assumption for assigning raw material cost to products. In total, process costing was reported by 60 percent of respondents, and job order costing by 40 percent. FIFO was the most frequently used cost flow assumption for applying raw material cost (43 percent), followed by standard cost (29 percent) and weighted average (20 percent).[1]

Actual costs for raw materials were applied by 68 percent of companies using a job order system and by 73 percent of those using a process cost system. Standard costs were used by 32 percent and 27 percent, respectively. Although it is generally assumed that process costing facilitates standard costs, the lower level of adoption may be due to the diversity of products produced by many N.Z. companies and their relatively short production runs. Both of these

**Exhibit 1. Product Costing Methods**
**(in percentages)**

| Raw material application method | Job order | Process cost | Total companies |
|---|---|---|---|
| First-in-First-out | 19 | 24 | 43 |
| Last-in-First-out | 4 | 2 | 6 |
| Weighted average | 2 | 18 | 20 |
| Standard cost | 13 | 16 | 29 |
| Other methods | 1 | 1 | 2 |
| Total Companies | 40 | 60 | 100 |

[1] The low use of LIFO (6 percent) is attributable to its non-acceptance for N.Z. income tax purposes.

factors would increase the cost of developing and maintaining standards.

For the control of materials and supplies inventory, 73 percent of the companies utilized material requisitions for source documents, and 85 percent maintained a perpetual inventory. All companies took an annual, or more frequent, physical count of material inventory. Companies using material requisitions were twice as likely to report that they were "always" successful in reconciling physical inventory with perpetual inventory records.

A predetermined overhead rate of product costing was used by 60 percent of companies using process costing and 90 percent of those using job order costing. This is an indication of the difficulty of tracing actual overhead costs to a wide variety of specific jobs.

## OPERATING BUDGETS' PLANS AND REPORTS

Four aspects of operating budget plans and reports were considered: (1) budget administration and management; (2) budget plans; (3) budget reports; and (4) standard costs.

### Budget Administration and Management

In administering budget systems, 57 percent of companies used a budget committee and 52 percent a budget manual or similar guideline. Both techniques were utilized by 37 percent of respondents, and 31 percent employed neither administrative tool. In this sample of companies, the larger companies relied more heavily on one or both of these tools.

A second important aspect of budget administration is the participation of managers in the budget preparation. A question on the participation of line or operating managers in budget setting revealed that 91 percent of the companies involved line managers from one or more levels of the organization. Although the survey did not examine the type or extent of participation, it did seek an assessment of the impact of participation. Exhibit 2 indicates the degree of influence that managers exert on the budget.

### Budget Plans

Detailed information was collected on the types of budget plans, budget periods and subperiods, advance preparation time, and frequency of revisions. Exhibit 3 summarizes the extent of preparation for specific budgets and, with other data collected, it reveals that:

1. More than 80 percent of these companies prepared budgets for

**Exhibit 2. Effectiveness of Manager Participation in Budget Preparation**

| Participation of line/ operating management materially influences budget | Percentage of companies responding |
|---|---|
| Always | 25 |
| Frequently | 51 |
| Sometimes | 17 |
| Special cases | 4 |
| Never | 0 |
| No response | 3 |
| | 100 |

**Exhibit 3. Preparation of Budget Plans**

| Type of budget plan | Percentage of total respondent companies preparing budget plans |
|---|---|
| Sales | 92 |
| Production | 86 |
| Direct materials | 80 |
| Direct labor | 82 |
| Manufacturing overhead | 82 |
| Selling/Distribution expenses | 85 |
| Administration expenses | 90 |
| Research and development | 45 |
| Profit and loss | 90 |
| Balance sheet | 56 |
| Capital expenditure | 88 |
| Working capital | 73 |
| Inventory levels | 63 |
| Cash | 90 |

total production, production costs, capital expenditure, and marketing costs.
2. Financial position budgets were reported by only about 60 percent of the companies.
3. Larger companies prepare more types of budgets. Of the larger companies (over $15 million of total assets), 65 percent reported preparing at least thirteen of the fourteen budgets. For the medium-sized companies ($4.1 to $15 million of total assets), only 42 percent prepared at least thirteen of the budgets and 18 percent prepared fewer than nine of the budgets. Two-thirds of the smaller companies prepared fewer than nine of the budgets.
4. The preparation of other budgets including repairs and main-

tenance, manpower, export sales, forward orders, plant obsolescence, return on investment, funding, and fixed manufacturing costs was very limited with less than 20 percent of the respondents preparing any one.

A question on the use of static or flexible concepts of budgets revealed that fixed volume was assumed by 62 percent of respondents, and only 38 percent reported that their budgets were adaptable to changes in sales or production volume.

The time period covered by the budgets was very uniform across the types of budgets and for the different respondents. A similar but slightly less uniform pattern was also found for subperiods within the full budget period.

For each budget leading to the summary profit and loss budget, fewer than 8 percent of the respondents used a budget period which was either less than or greater than twelve months. The only significant exceptions to this were for the cash budget (17 percent prepared it for less than twelve months) and capital expenditure budgets (18 percent prepared it for more than twelve months).

For all types of budgets, the most commonly reported subperiod was one month. Only the production budget had more than 10 percent of respondents using a budget subperiod of less than one month. A subperiod longer than one month was observed for the balance sheet (47 percent of respondents), capital expenditure (31 percent of respondents) and to a lesser extent for profit and loss, research and development, working capital, and inventory levels.

Almost all of the budgets were prepared for four or fewer months prior to the commencement of the budget period. The sales budget was most frequently prepared three or four months in advance, followed by production and direct cost budgets. Overhead and non-manufacturing expense budgets were most likely to be prepared one or two months in advance, and the cash budget was most likely to be prepared one month in advance. This result is consistent with the planning needs of those particular budgets.

Exhibit 4 summarizes the frequencies for budget reviews. Although the majority of individual budgets conformed to a semiannual or monthly pattern of review, the latter was more common than the former for four budgets: production, working capital, inventory level, and cash. For the first three, monthly reviews were only slightly more common than six-month reviews; however, for

**Exhibit 4. Frequency of Budget Review**

| Review period | Percentage response for all budget types |
|---|---|
| 1 month or less | 28 |
| 3 months | 10 |
| 6 months | 30 |
| 12 months | 15 |
| As required | 17 |
| | 100 |

cash budgets, 48 percent reported a monthly review, 8 percent a quarterly review, 19 percent a semiannual review, 6 percent an annual review, and 19 percent reported "as required."

### Budget Reports

This section of the survey considered the use of budgets for cost control and performance evaluation. Of the companies preparing a budget, 81 percent also prepared regular budget control reports. Exhibit 5 summarizes additional details of practices for budget control reports. Increased total asset size and budget report practices were associated with at least two practices: the frequency of using budget reports and the separation of controllable from noncontrollable items in the budget report.

Budget reports highlight the variances between plans and actual operations, and the investigation of these variances is an important aspect of cost control. The investigation of variances is costly, however, and the management accounting system will be more efficient if variance investigation is restricted to significant, controllable variances. Exhibit 6 summarizes responses to a question on the selection of variances for investigation. The majority of respondents chose the open-ended response of "other" and amplified this by describing a subjective approach of investigating "important" variances.

The preparation of specific types of budget reports is reported in exhibit 7. The first column of percentages was based on the total companies in the survey, while the second column of percentages relates the number of companies preparing budget reports to the number that prepared the equivalent budget plan. For all budget plans, at least 74 percent of the companies preparing the plan also prepare the corresponding budget report.

**Exhibit 5. Analysis of Budget Reports**

| | Percentage of companies preparing regular budget reports* |
|---|---|
| Monthly report periods | 68 |
| Current period comparison | 94 |
| Y-T-D comparison | 100 |
| Reports include variance explanation | |
| Always | 23 |
| Frequently | 30 |
| Sometimes | 25 |
| Other | 22 |
| | 100 |
| Report discussed with responsible manager | |
| Always | 38 |
| Frequently | 42 |
| Sometimes | 18 |
| Other | 2 |
| | 100 |
| Reports separate controllable/ noncontrollable costs | 74 |

* The percentages in this table are based on the total companies preparing budget reports.

**Exhibit 6. Variances Selected for Investigation**

| | Percentage response for companies preparing budget reports |
|---|---|
| All variances | 22 |
| Variances > $ limit | 3 |
| Variances > % limit | 6 |
| Other | 69 |
| | 100 |

### Standard Costs and Variances

The use of one or more standard costs was reported by 54 percent of the respondents. Exhibit 8 summarizes the details of the standard cost systems used by companies using standards. A high proportion of companies using standard costing used standards for both direct material and direct labor, and a larger majority also used standard costs for manufacturing overhead.

Several methods were reported for setting standard costs, and

**Exhibit 7. Preparation of Specific Budget Reports**

| Type of budget report | Percentage of total respondents | Percentage of companies preparing equivalent budget plan |
|---|---|---|
| Sales | 74 | 81 |
| Production | 74 | 86 |
| Direct materials | 61 | 76 |
| Direct labor | 69 | 84 |
| Manufacturing overhead | 68 | 83 |
| Selling/Distribution expenses | 66 | 80 |
| Administration expenses | 73 | 80 |
| Research and development | 36 | 79 |
| Profit and loss | 79 | 87 |
| Balance sheets | 52 | 94 |
| Capital expenditures | 68 | 77 |
| Working capital | 54 | 74 |
| Inventory levels | 63 | 100 |
| Cash | 73 | 80 |

most companies used more than one method. Historical records were utilized by 81 percent of the companies. In addition, a majority used engineering studies and/or sample runs for material standards, and time and motion studies, method-time-measurement, and/or sample runs for labor standards.

The material price variance was calculated at the time of material purchases by only half of the companies, and the other half delayed the calculation of the material price variance until the materials were issued to production.

## LONG-RANGE PLANNING AND CAPITAL BUDGETING

The use of long-range plans was reported by 54 percent of the total respondents. The usage varied considerably with size, however, with 64 percent of larger companies (total assets in excess of $15 million) reporting using long-range plans, compared with 59 percent of medium-sized companies (total assets between $4.1 million and $15 million), and 33 percent of smaller companies (total assets less than $4 million).

The majority (61 percent) of companies used a five-year planning period for their long-range plans. A three-year planning period was used by 35 percent, while periods longer than five years, or shorter than three years, were each reported by only 2 percent of the companies.

**Exhibit 8. Analysis of Standard Cost Usage and Variances***

Standard Costs Used (100%)

| | Direct materials | | Direct labor | | Manufacturing overhead | |
|---|---|---|---|---|---|---|
| | 93% | | 93% | | 84% | |
| Methods of Setting Standards | Engineering studies | 52% | Time/Motion | 48% | | |
| | | | MTM | 38% | | |
| | Sample runs | 55% | Sample runs | 69% | | |
| | Historical records | 81% | Historical records | 79% | | |
| Variances Isolated | Total only | 32% | Total only | 41% | Total only | 76% |
| | Price | 67% | Rate | 48% | Two variances or more | 24% |
| | Quantity | 64% | Efficiency rate | 52% | | |
| | Price and quantity | 39% | and efficiency | 17% | | |
| | Price variance isolated at | | | | | |
| | Purchase | 50% | | | | |
| | Issue to production | 50% | | | | |

* The percentages in this table are based on the companies using standard costs.

A wide variety of long-range plans was prepared. The most frequently reported were those for cash, capital expenditure, sales, and profit. All of these were prepared by more than 44 percent of the total companies. Exhibit 9 provides additional data on the percentage of all companies preparing specific long-range plans and on the percentage of companies that prepared a specific long-range plan when they had also prepared the equivalent operating budget.

Capital budgeting is an important decision area associated with long-range planning. Exhibit 10 summarizes the combinations of capital budgeting techniques being used by companies in this survey. The following observations may be made from exhibit 10 and other information collected on capital budgeting techniques:

1. Only 43 percent of the respondents used net present value or internal rate of return.
2. Accounting rate of return was used to some extent by 63 percent of the companies.

**Exhibit 9. Preparation of Specific Long-Range Plans**

| Types of long-range plans prepared | Percentage based on total respondents | Percentage based on companies preparing equivalent operating budget |
|---|---|---|
| Sales | 46 | 51 |
| Production | 33 | 39 |
| Direct materials | 29 | 36 |
| Direct labor | 31 | 38 |
| Manufacturing overhead | 31 | 38 |
| Selling/distribution expenses | 29 | 34 |
| Administration expenses | 32 | 36 |
| Research and development | 28 | 39 |
| Profit and loss | 44 | 49 |
| Balance sheet | 36 | 64 |
| Capital expenditure | 46 | 53 |
| Working capital | 39 | 54 |
| Cash | 48 | 53 |

**Exhibit 10. Combinations of Capital Budgeting Techniques Used by all Respondents**

| Capital budgeting analysis techniques | Percentage of total respondents |
|---|---|
| Accounting rate of return only | 12 |
| Payback only | 15 |
| Accounting rate of return and payback | 23 |
| Internal rate of return only | 7 |
| Net present value only | 1 |
| Accounting rate of return and one discounting method | 8 |
| Payback and one discounting method | 7 |
| Accounting rate of return, payback and one discounting method | 20 |
| No method reported | 7 |
| | 100 |

3. Payback period was used by 65 percent of the companies.
4. Internal rate of return was used almost twice as frequently as net present value.
5. Larger companies (total assets greater than $15 million) were most likely to use discounted cash-flow analysis.
6. For all asset size groups, accounting rate of return and payback were reported more frequently than either of the discounted cash-flow methods.

7. The smallest asset size group (less than $4 million of total assets) used accounting rate of return most frequently, while for the other asset size groups, payback was the most frequently used technique.

The final aspect of capital budgeting analysis to be considered was the incorporation of risk adjustments into the decision-making processes. The majority of companies reported that neither a quantitative nor a nonquantitative risk adjustment was used in their capital budgeting analysis. Of those which did use risk adjustment, 33 percent used a quantitative adjustment, usually requiring a higher profitability or a shorter payback period, and 29 percent used a subject nonquantitative adjustment.

## OTHER MANAGEMENT ACCOUNTING TECHNIQUES

This survey also sought information on the use of some additional techniques employed in management accounting and decision making. Specifically, these techniques were for cost estimation, cost-volume-profit analysis, direct costing, and operations research.

Cost estimation is required for budgeting, the evaluation of actual performance, and for production and pricing decisions. Exhibit 11 reports the use of different techniques for cost estimation and identifies the following:

1. The most common technique was to utilize past results through an examination of accounts. This was reported by 75 percent of the respondents.
2. An engineering method, including the use of time and motion analysis or methods-time-measurement, was reported by almost half of the companies, including 74 percent of the larger companies with total assets greater than $15 million.
3. The high-low method, visual curve fitting, and regression analysis which use past data to generate a cost function through quantitative or graphical analysis were reported by only 8 percent of the respondents.

**Exhibit 11. Cost Estimation Techniques**

| | Percentage of all respondents |
|---|---|
| Examination of accounts | 75 |
| Engineering methods | 46 |
| High-low method | 4 |
| Visual curve fitting | 2 |
| Regression analysis | 2 |

Direct costing and cost-volume-profit analysis are useful techniques for short-term pricing and production decisions. Cost-volume-profit analysis was reported by 71 percent of all respondents, and direct costing for decision making was reported by 49 percent. Of those companies that did use direct costing, 39 percent used it for pricing decisions, and 93 percent used it for other short-run decisions.

Finally, the questionnaire sought information on selected operations' research techniques. As summarized in exhibit 12, only critical path analysis is used by more than 25 percent of companies. All other techniques had a low incidence of use.

## SUMMARY

A survey of publicly listed N.Z. manufacturing companies was conducted to determine their cost and management accounting practices. Although New Zealand is much smaller than the United States, its business and educational environment is similar to that of the United States. Consequently, the companies in this survey face business problems and alternatives similar to those faced by medium- and smaller-sized U.S. manufacturers. The results of this survey indicate that the cost and managerial accounting techniques the N.Z. companies used to satisfy their internal accounting needs were the same basic techniques familiar to U.S. managerial accountants.

It would be useful to make some international comparisons of the extent to which the particular cost and management accounting techniques are used. This would provide information concerning the practical international transferability of cost and management accounting practices. It would also provide data for identifying the cultural, economic, educational, and industrial factors that influence the rate and extent of transferability. Furthermore, such a data base would be useful to international agencies, such as the Organization of Economic Cooperation and Development and the

**Exhibit 12. Percentage Use of Operations' Research Techniques**

| Technique used | Percentage of all respondents |
|---|---|
| Critical path method | 26 |
| Simulation | 15 |
| Linear programming | 12 |
| Regression analysis | 8 |
| Queueing theory | 1 |

United Nations, concerned with implementation of economic techniques that can improve the planning, allocation, and control of resources in newly industrialized countries. To achieve such an international comparative data base, further comprehensive studies such as this one should be conducted for the United States and several other countries.

# *Is Historical Cost Accounting Possible during Hyperinflation?*

JEFFREY L. CALLEN and JOSHUA LIVNAT*

Despite the great debate during the 1970s concerning accounting for changing price levels and the double-digit inflation which caused it, official accounting bodies in the United States never acted to replace the traditional historical-cost accounting framework with alternatives such as general price level or current-value accounting. There were, of course, changes in reporting requirements prompted by inflation. SFAS No. 33 mandates inflation-adjusted supplementary information, at least for large corporations.[1] Nevertheless, this information is supplementary, whereas the fundamental structure of the annual financial report is still based on historical-cost accounting principles. Whether the reluctance on the part of the profession to demand more radical changes was due to the lack of consensus as to the appropriate capital maintenance concept, as some have argued, because it was thought that inflation could yet be a temporary historical phenomenon, or because the potential costs of such change were too enormous is difficult to determine. Perhaps all these factors contributed. For whatever reasons, no revolutionary changes in reporting principles occurred during the double-digit inflationary period in the United States.

The basic purpose of this paper is to examine the modifications

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[1] Financial Accounting Standards Board, "Financial Reporting and Changing Prices," *Statement No. 23* (Stamford, Conn.: FASB, 1979).

made to historical-cost accounting principles because of hyperinflation. Although (fortunately) the United States did not experience hyperinflation, countries such as Israel, Brazil, and Argentina did. What is important in the Israeli experience is that prior to her hyperinflationary situation, Israeli generally accepted accounting principles (GAAP) and common accounting practices followed closely those of the United States. Like its U.S. counterpart, the Israeli Institute of Certified Public Accountants (IICPA), which promulgates accounting standards in Israel, now requires large firms to provide some disclosure of price-level adjusted profits in a footnote to the financial statements. Most crucially, the IICPA did not and has not required a complete revamp of the historical-cost accounting framework despite an inflation rate of over 190 percent per year. Nevertheless, some modifications to the traditional historical-cost model were made by either the IICPA or by individual firms over the years as inflation intensified. Thus, the Israeli case is worth investigating because it illuminates those areas of conventional reporting where inflation has had the greatest impact.

One may question the appropriateness of investigating the case of a hyperinflation to determine the modifications needed in moderate- and low-inflationary economies. However, such an investigation is conceptually equivalent to the common practice of testing a new airplane by subjecting it to severe stresses — stresses it would never be expected to endure under normal flying conditions. Only by undergoing such testing are the strengths and weaknesses of the airplane manifest.

The authors will now describe the adjustments to standard GAAP made necessary by Israeli hyperinflation. Since these adjustments generally allowed firms greater reporting latitude, the authors also provide descriptive statistics concerning both the proportion of Israeli firms which adopted these adjustments in practice and also the effect of such adjustments on financial statements. Although no general claims as to the optimality of the ICCPA's adjustments to standard GAAP are made, the authors argue that the benefits of each adjustment appear to outweigh the costs, especially when the firms initiated the adjustments. The authors shall also argue that the Israeli experience indicates that there is an alternative response to revamping completely the existing reporting structure because of inflation. This alternative response, perhaps more than any other potential response, demonstrates the strengths and weaknesses of the historical-cost model. In particular, the Israeli

response is useful in evaluating whether the Financial Accounting Standards Board (FASB) was correct in requiring supplementary information of inventories, fixed assets, cost of goods sold, and depreciation only, without extending it to other accounting items.

The next section describes the type of adjustments made in Israel to the standard historical-cost accounting model.

## REVALUATION OF FIXED ASSETS

In hyperinflationary economy, the gap between the historical cost of a fixed asset and its market value can become quite significant within a short period of time. Even items such as automobiles and equipment with a relatively short lifetime become severely undervalued in the balance sheet. Because of this, Israeli firms will at times revalue fixed assets in the balance sheet. The usual procedure is to obtain an independent appraisal of the asset value from an expert appraiser. The difference between the market value of the fixed assets and their book value is debited to the asset account. This increases future depreciation expense on the books, but the increased depreciation is not recognized by the tax authorities for income tax purposes. Therefore, the credit to the revaluation is partially to stockholders' equity and partially to deferred taxes. For example, if the tax rate is 60 percent and the revaluation of fixed assets is 200,000, the revaluation is recorded as

| | |
|---|---|
| Fixed assets | 200,000 |
| Deferred taxes | 120,000 |
| Shareholders' equity | 80,000 |

It should be emphasized that the IICPA has not mandated revaluations but has not restricted them, either. Since the revaluation procedure is actually quite expensive, most Israeli firms find it advantageous to revalue their fixed assets *only* prior to issuing stock. There are two major reasons for this. First, to facilitate selling the shares, the firm is pressured to provide data which give the potential stockholder the information to compare the issue price with the exit value of the assets to which the share entitles the holder. Second, the proportion of existing shareholder equity prior to issuance is much smaller in the absence of a revaluation because it is derived using historical-cost principles. Thus, if existing shareholders wish to issue a large number of new shares and are to retain the same proportion of the equity held before issuance, revaluation is necessary.

To see how prevalent revaluations are prior to issuing stock,

data were collected on a random sample of thirty-three firms which went public in Israel between May and November 1982. Of these, eighteen firms revalued their fixed assets. Of the remaining fifteen, four were computer software firms with little fixed assets to revalue. Therefore, a large proportion of Israeli firms which go public revalued their fixed assets. Exhibit 1 provides some interesting data of those firms which revalued their assets.

As the exhibit indicates, firms increased their fixed assets values approximately tenfold on the average because of the revaluation process. Furthermore, the revaluation increased total assets by a material amount. The exhibit reveals that revaluation accounts for approximately 50 percent of total assets (after the revaluation). Thus, the book value of the firm after the revaluation doubled on the average, presumably making the firm more desirable to potential investors. Of course, whether the revaluation has any real impact on market valuation or whether it is simply window-dressing is an empirical question. Stickney, for example, has documented such window-dressing behavior for U.S. firms going public.[2]

**Exhibit 1.**

| Firm | Percentage increase of fixed assets due to revaluation | Percentage of the revaluation to total assets |
|---|---|---|
| Haman | 490 | 53 |
| Andin | 1,345 | 53 |
| Shahaf | 920 | 61 |
| Hilan | 413 | 90 |
| Octagon | 360 | 27 |
| Arazim | 405 | 52 |
| Data Michum | 358 | 57 |
| Pargod | 3,400 | 80 |
| Atlas | 1,946 | 59 |
| Asis | 295 | 28 |
| Yahalom | 5,647 | 85 |
| Mif | 186 | 7 |
| Sunfrost | 124 | 49 |
| Shladot | 774 | 52 |
| Sano | 88 | 28 |
| Alumit | 1,600 | 72 |
| Vitalgo | 21,303 | 45 |
| Ayit | 48 | 1 |
| Average | 2,207 | 50 |
| Average without No. 17 | 1,084 | |

[2] Clyde P. Stickney, "Window-Dressing the Interim Earnings Report: An Empirical Assessment for Firms Going Public," *Journal of Business* (January 1975), 87-97.

### VALUING INVENTORIES BY THE GROSS MARGIN METHOD

In hyperinflationary economy, the need for some adjustment to historical inventory value seems evident. One method prevalent among Israeli industrial firms is to value finished goods inventory by selling price less normal profit. This method approximates current replacement cost if the profit rate is stable. In fact, this method provides a more current inventory cost than would FIFO, especially if the inventory turnover is not too great. While the gross margin method is not permitted in the United States in annual financial statements, it is permitted by Accounting Principles Board Opinion No. 28[3] for interim financial statements. In Israel, it is used both in interim and annual reports because of hyperinflation. Interestingly, in this area, as in revaluations, the firms themselves rather than the IICPA led in modifying the standard historical-cost approach.

To obtain some idea as to the pervasiveness of this inventory valuation method among Israeli firms, we examined all Israeli industrial firms which issued securities in the period January 1, 1982, through March 31, 1983. Of forty-four such firms, twenty used the gross margin method to value their inventories. This was a different sample from the one cited in the previous section since it consisted of industrial firms only.

### CAPITALIZATION OF FINANCING EXPENSES

One of the principles underlying traditional accounting is the separation of an asset's cost from the cost of financing the purchase. Thus, for example, if an asset is acquired by issuing long-term notes to the seller, the asset cost for balance-sheet purposes is determined by the present value of these notes. Opinion No. 21 of the APB[4] requires the firm to distinguish between two transactions, the purchase of the asset and its financing.

When an asset is purchased using short-term credit by the supplier, the question arises as to whether the cost of the credit should be charged to income as a financing expense or be included in the asset cost. From a theoretical point of view, of course, it should be excluded from the asset cost and charged to income. However, as a short-term credit, its inclusion in the asset cost does not normally change the cost of the asset materially. Hence, for

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[3] American Institute of Certified Public Accountants, "Interim Financial Reporting," *APB Opinion No. 28* (New York: AICPA, 1973).

[4] American Institute of Certified Public Accountants, "Interest as Receivables and Payables," *APB Opinion No. 21* (New York: AICPA, 1971).

practical considerations, short-term financing expenses are generally included in the United States in the asset cost. Suppose, however, that the firm operates in a hyperinflationary economy and that it uses short-term credit to finance its purchases. Inevitably, the credit will be linked either to a foreign currency or to the Consumer Price Index (CPI). Since the effect of say three months' credit can become more than 25 percent of the asset cost because of the linkage, it seems reasonable to exclude the cost of financing from the asset cost and charge it to income in spite of the credit being short-term in nature.

The IICPA issued a pronouncement on the subject of financing expenses (and revenues) resulting from loans denominated in a foreign currency or linked to the CPI. The IICPA requires firms to include such financing expenses in income in the period in which they were created. The IICPA provided, however, one exclusion to this rule: when a firm uses short-term financing denominated in foreign currency (for example, foreign supplier's credit) to purchase an asset, the financing charges are capitalized and included in the asset cost. Thus, firms that use short-term financing to purchase assets may increase the value of these assets by capitalizing the financing expenses. As a side benefit, the firm increases current reported earnings since the financing expenses are not charged to income.

To find the number of firms that conformed to this pronouncement, the random sample of thirty-three firms that issued stock for the first time in the period May to November 1982 was examined. Eight firms had capitalized financing expenses as part of the inventory and fixed asset costs. Given the negative implication for tax purposes, as the expenses claimed on the tax return are reduced, we feel that this is a substantial proportion. To compare this proportion to a benchmark, we can use the number of U.S. firms that capitalized interest cost during construction prior to the 1974 moratorium declared by the Securities Exchange Commission. The 1973 *Accounting Trends and Techniques* reports that 34 firms of 600 sampled capitalized interest cost during construction. One should note that U.S. firms may claim the expense for tax purposes but capitalize it in the financial report, a practice not acceptable in Israel.

## RECOGNIZING UNREALIZED REVENUES

One of the principles of the historical-cost accounting system is the realization principle. Under this principle, revenues are not included in income until they are realized. For example, when a

firm invests excess cash in marketable equity securities that subsequently appreciate in value, no gains are reported in the income statement until the firm liquidates the investment. In hyperinflationary economies, however, reporting the investment at cost rather than at market value leads to a gross understatement of the investment, especially if the investment retains its real value, that is, appreciates in nominal terms at the same rate as the inflation rate.

In Israel, most corporate sector and government bonds are linked to the CPI. This raises the problem of the proposed method to account for the appreciation in the value of bonds because of increases in the price index. The IICPA decided that since the CPI is not expected to decline in the foreseeable future, such appreciation can be recognized as income. Thus, firms record the appreciation in value as an increase (debit) to the investment account and as a corresponding credit to income. In the sample of thirty-three firms previously described, the average increase in investment value due to appreciation is approximately tenfold, although it should be emphasized that investment usually accounts for less than 10 percent of total assets. Thus, the understatement of the asset is substantive, although the effect on total asset is not material for most firms.

This practice, which essentially violates the conservatism principle, can produce abnormal results in extreme cases. For example, a supermarket chain that raises equity for eventual expansion of its chain may invest the proceeds in government-linked bonds. In this way, the firm maintains the real value of the equity by investing in the CPI. The investment is liquidated as payments are made to the builders. Since the appreciation in value of these loans is recorded as income and since a supermarket chain operates on a very low margin, the income due to operations may be substantially less than the income from financial investments. In one particular case, the ratio was four to one. This, of course, would not occur in a strict historical-cost system which would only recognize the gain when the investment is liquidated.

### THE IMPLICATIONS TO MODERATE- AND LOW-INFLATIONARY ECONOMIES

The four departures from the historical-cost system described earlier dealt with three sensitive balance sheet areas: inventories, fixed assets, and investment in bonds. The common denominator of these deviations is that they all increase the recorded value of the assets on the balance sheet. The fixed assets of firms increase

by the revaluation of such assets and by the capitalization of short-term financing expenses. The inventory-carrying amount is larger if one uses the gross margin method for finished goods or when one capitalizes certain financing cost in inventories. Similarly, bonds are writen up if one recognizes the appreciation in their market value due to inflation. Thus, these methods lead to greater balance sheet valuations than would have been recognized if strict adherence to a historical-cost system was required.

These areas seem to have been selected for change (whether on the part of the IICPA or the firms themselves) because of three major reasons:

1. The gap between the historical-cost valuation of these items and their current market value is greater than for many other items, particularly assets with high turnover or more liquid assets, such as receivables or prepaid expenses which are denominated in monetary terms;
2. These assets constitute a large proportion of the total assets of firms. For many firms, inventories and fixed assets exceed 60 to 70 percent of their total assets. Undervaluation of these assets results in a major undervaluation of the total firm's assets and may have negative ramifications on the firm's ability to raise additional debt or equity; and
3. These assets reflect areas where the costs of deviating from historical-cost standards are rather minor in comparison to the benefits. For example, adjusting the value of the linked bonds produces both higher balance sheet values and higher income. This income is not taxable in Israel for most firms and is therefore not accompanied by negative cash flows. The revaluation of fixed assets, although expensive because of the need to hire an independent appraiser, increases stockholders' equity substantially and provides firms with the opportunity to distribute large amounts of stock dividends, a very common practice in Israel. Since the appreciation in the fixed asset's value is not taxable until it is liquidated, no negative cash flows effects exist. The gross margin method for inventories may result in larger tax payments as would a FIFO method in comparison to a LIFO method. However, LIFO is not permitted in Israel (for tax purposes), and most industrial firms have very low effective tax rates due to the many governmental incentives to encourage industrial development. By adopting the gross margin method, firms can report higher income and higher inventory values with a minimal effect on cash flows.

What are the implications then for a moderate- or low-inflation environment? The areas selected by the FASB for supplementary disclosure seem precisely those areas that are first more affected by inflation and, second, are less costly to adjust. The experience gained by the supplementary disclosure procedures may aid regulatory agencies in prescribing a deviation from historical-cost accounting if inflation increases substantially. A second implication concerns the valuation of financial instruments which are linked to an index and which are traded in an established market. Gains on such instruments can be recognized in every period, not only when the instruments are liquidated. In the United States, such instruments may include future contracts, options on stock market indexes, and index funds.

The most important implication seems to be that the historical-cost model, which has demonstrated its usefulness for about five centuries, does not have to be revamped or abolished completely. It may be more useful (unless perhaps inflation exceeds 300 percent per annum) and far less costly to amend just certain areas of the present historical-cost model using some "patch" work as in Israel than to abolish the model completely.

# *Accounting for Forward Exchange Contracts*

M. ALI FEKRAT*

This paper has a dual objective. First, it seeks to examine critically the accounting for forward exchange contracts as outlined in Statement No. 52 of the Financial Accounting Standards Board (FASB). Second, it offers a new theoretical framework to account for such contracts by drawing on the existing literature in economics and accounting.

The principal reason for writing this paper is the author's own dissatisfaction with the treatment of forward exchange contracts in Statement No. 52. The object is to focus attention on the issues involved rather than to offer a definite treatment of the problem.

## CRITIQUE OF ACCOUNTING UNDER STATEMENT NO. 52

Statement No. 52 distinguishes between forward exchange contracts that are speculative and those that hedge or cover existing commitments. The latter are recorded and reported differently, depending on the relationship between forward contracts and the hedged commitment. If the hedged commitment is a firm's net investment in a foreign entity, gains or losses on the forward contract, measured by multiplying the foreign currency amount of the contract by the difference between the spot rate at the balance sheet date and the spot rate at the date of inception of the forward contract, are reported as a separate component of equity. However, if the hedged commitment is an identifiable foreign currency transaction yet to be consumated (for example, an agreement to purchase merchandise), the gain or loss on the forward contract is deferred and included in the measurement of

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the related foreign currency transaction. But if the hedged commitment is an identifiable foreign currency transaction already consumated (for example, merchandise purchased with payment to be made later), any gain or loss on the forward contract is recognized currently. The discount or premium on the forward contract is accounted for separately from the gain or loss.

Gains or losses from speculative contracts are computed by multiplying the foreign currency amount of the forward contract by the difference between the forward rate available for the remaining maturity of the contract and the contracted forward rate which is recognized currently. No separate accounting recognition is accorded to the discount or premium on speculative forward contracts.[1]

Statement No. 52 does not offer a clear and systematic theoretical argument as to why different forward contracts should be accounted differently or why forward contracts should be formally recorded in the accounts at all. To be sure, forward contracts are agreements to exchange different currencies at a specified rate in the future. Present accounting postulates and principles forbid the recording of such executory contracts until the terms of the contract are actually fulfilled. For example, a labor contract that specifies the number of workers to be employed and wages to be paid or a materials purchase agreement that specifies quantities and prices of materials to be bought are not entered into the accounts until the terms of the contract are substantially fulfilled. Thus, Statement No. 52 is not quite clear as to why currency purchase contracts negotiated for future delivery at a predetermined price should be recorded and gains and losses accounted for before the transaction is consumated. Accountants always invoke the principle of conservatism to record market losses but never gains (at least not beyond the recovery of past losses); however, for forward exchange contracts, this principle seems to have been swept aside without adequate explanation.

A further elaboration is possible by focusing on several concrete cases. Assume a U.S. importer agrees to buy DM 1 million of goods from a German exporter. The U.S. importer may choose one of the following options to pay for this purchase: (1) wait until the delivery date to buy and remit marks to the exporter, (2) buy

[1] For a graphic presentation of the accounting for forward contracts under Statement No. 52, see Thomas A. Ratcliffe and Paul Munter, "Currency Translation: A New Blueprint," *Journal of Accountancy* (June 1982), 86. See also Jeffrey S. Arpan and Lee H. Radebaugh, *International Accounting and Multinational Enterprises* (Boston: Warren, Gorham & Lamont, 1981), 92-99.

German marks spot and invest the funds in the money market until payment is due, or (3) enter into a forward contract for marks to coincide with the delivery date of goods. The importer will ceteris paribus choose the option that appears cheaper. Given interest rate differentials between the two countries, the cost of option (1) is the mark total of imports multiplied by the expected exchange rate prevailing when the exporter wishes to repatriate funds less interest earned on this amount in the United States, while the cost of option (2) is the mark total of imports multiplied by the spot exchange rate less interest earned on this amount in Germany or in Euromoney accounts, and the cost of option (3) is the mark amount of imports multiplied by the forward exchange rate less interest earned on this amount in the United States.

While the decision model is fairly straightforward, conventional accounting standards do not generally record or report information unless a transaction has in substance been consumated. Options (1) and (3) fall into that category, while option (2) involves a consumated transaction. However, options (2) and (3) both involve hedging against changes in exchange rates that could otherwise alter the magnitude of the liability created as a result of agreeing to pay for imports in foreign exchange. Thus, under both these options, exchange rate fluctuations would henceforth be inconsequential and could, therefore, be expunged from the accounts. If the effects of exchange rate changes are to be shown under either of these two options, the gain (loss) on foreign exchange purchased would be offset by the loss (gain) on the liability to the exporter. Statement No. 52 is at best unclear and at worst inconsistent on the accounting for exchange rate gains and losses on hedged transactions. If, as we have argued, there cannot be a net exchange rate gain or loss on hedged transactions, the statement that

> a gain or loss on a forward contract . . . that is intended to hedge an identifiable foreign currency commitment (for example, an agreement to purchase or sell equipment) shall be deferred and included in the measurement of the related foreign currency transaction (for example, the purchase or sale of the equipment)

is misleading and inconsistent with the basic idea of hedging.

The accounting under option (1) should be different in that it should consider the financial consequences of speculating. Existing accounting principles require that when a loss due to market price changes occurs after an uncancelable commitment to purchase goods has been made, it should be recognized and reported in the

income statement. The American Institute of Certified Public Accountants sums up this situation as follows:

> Accrued net losses on firm purchase commitments for goods for inventory, measured in the same way as are inventory losses, should, if material, be recognized in the accounts and the amounts thereof separately disclosed in the income statement.[2]

Thus, if the exchange rate changes adversely subsequent to the date the commitment to import goods was made, the resulting loss should be recognized in the accounting period during which the rate decline occurred. A concrete example would be instructive. Assume that at the time the U.S. importer entered into the agreement to purchase DM 1 million of goods, the exchange rate was \$.3903 per U.S. dollar. Assume further that by balance sheet, the rate had changed to \$.3953 per U.S. dollar, resulting in a loss of \$5,000. The entry to record the loss would be as follows:

| | | |
|---|---|---|
| Loss on import commitment due to exchange rate change | 5,000 | |
| Liability arising from import commitment | | 5,000 |
| (To record loss due to decline in value of dollar) | | |

Assume further that by the payment date, a further loss of \$5,000 had occurred. The entry to record the purchase and additional loss would be the following:

| | | |
|---|---|---|
| Loss on import commitment due to exchange rate change | 5,000 | |
| Liability arising from import commitment | | 5,000 |
| (To record additional loss due to decline in value of dollar) | | |
| Inventory | 390,300 | |
| Liability arising from import commitment | 10,000 | |
| Cash | | 400,300 |
| (To record purchase of goods under contract on which a loss due to exchange rate changes has been recognized) | | |

[2] *Accounting Research and Terminology Bulletins — Final Edition* (New York, 1961), 34.

It is possible to argue that increases in the value of the U.S. dollar in terms of marks should be recognized in the same way as decreases are. Under existing U.S. accounting standards, however, the recognition of gains are at best limited to the amount of past losses.

The treatment of speculative forward contracts in Statement No. 52 also appears to lack a clear theoretical foundation. According to paragraph 19 of the statement,

> A gain or loss on speculative forward contracts shall be computed by multiplying the foreign currency amount of the forward contract by the difference between the forward rate available for the remaining maturity of the contract and the contracted forward rate.

Yet forward contracts that do not hedge an exposure are entered into for the sole purpose of reaping a gain from the expected appreciation of the currency purchased. Thus, the proper measure of gain or loss on speculative forward contracts is a function of the gap between the contracted forward rate and the expected rate at any given moment in time, not determined by the difference between the contracted forward rate and the forward rate available for the remaining maturity of the contract. The latter rate is bound to change as the maturity date of the forward contract draws closer.

Before proceeding further, it is important to note a related FASB statement — Statement No. 80 — which focuses exclusively on the accounting for "exchange traded futures contracts." This statement and the portion of Statement No. 52 dealing with forward contracts are conceptually interrelated inasmuch as foreign currencies are commodities and have essentially the same economic attributes as all other economic goods. It is not clear, however, why Statement No. 80 specifically excludes foreign currency contracts altogether. Notwithstanding, Statement No. 80 is remarkably simple and lucid in its treatment of futures contracts. Although it will not be the focus of this paper, the conclusions reached here should have general applicability and should by extension encompass the recommendations of that statement.

## A THEORY OF ACCOUNTING FOR FORWARD EXCHANGE CONTRACTS

The foregoing analysis contains enough theoretical hints to form the basis of a coherent accounting for forward exchange contracts. In the remainder of this paper, the analysis will be considered and examined for its accounting implications.

Basically, the forward exchange market consists of hedgers and

speculators. "Hedgers" generally refers to short-term investors, borrowers, importers, and exporters whose spot asset (liability) is offset by a forward liability (asset). Hedgers' demand for forward exchange depends on two variables: interest rate differential (the U.S. minus German interest differential in our previous illustration) and the forward premium or discount on the foreign currency.[3] This means that the interest rate differential, together with the forward premium or discount on the foreign currency, influences the decision and hence the costs of hedging transactions. More specifically, assume the spot price of foreign exchange to be p, the interest differential between two countries, i, and the forward premium (+) or discount (−) on the foreign currency, r. Consider an importer who always strives to hedge by either purchasing spot or forward, depending on which is cheaper. The cost of purchasing spot is $p\ (1 + i)$, and the cost of purchasing forward is $p\ (1 + r)$. The importer's demand for forward exchange would be an increasing function of $(i - r)$.

An importer who does not hedge must speculate. The cost of speculating (waiting until payment must be made) is the expected price of foreign exchange, Pe. The importer will be induced to speculate if $Pe < p(1 + r)$ and $Pe < p(1 + i)$.

Once a decision is made and a transaction undertaken, the event must be recorded in accordance with generally accepted accounting principles. From the standpoint of management, however, it may be desirable to provide feedback on an ex post basis to indicate the actual cost of a particular decision and to compare it with the outcome of alternatives that could have been followed. This would require further analysis and data gathering, the cost of which may or may not be warranted by the perceived or actual benefits. However, the crucial point is that hedged transactions are immune to exchange rate fluctuations while speculative transactions are not, and accounting should reflect that distinction. This means that when an importer's forward liability (obligation to a foreign exporter) is offset by the purchase of foreign exchange on the spot market or on the forward market, the gain (loss) due to exchange rate fluctuations on the liability will always be neutralized by the loss (gain) on the asset. This condition is not obviously satisfied for speculative transactions.

When a foreign currency commitment is hedged by purchasing spot, both the spot purchase and the foreign currency commitment

[3] J. L. Stein, "International Short-Term Capital Movements," *American Economic Review* (March 1965), 40-66.

must be entered into the accounts if offsetting foreign exchange gains and losses are to be recognized. If foreign exchange gains and losses are not to be recognized, only the spot purchase need be recorded. In both cases, the eventual cash flow and effect on net income are the same. Assume the U.S. importer in our illustration agrees to pay DM 1 million for imports on the transaction day. Assume further that the importer buys DM 1 million spot at \$.3903, but the rate drops to \$.3860 on the balance sheet date and thereafter remains unchanged until payment date. These events could be recorded as follows:

| | | | |
|---|---|---|---|
| Transaction date: | Purchases | \$390,300 | |
| | Accounts payable | | \$390,300 |
| (To record the initial transaction at the spot rate) | | | |
| | Foreign currency (DM) | 390,300 | |
| | Cash | | 390,000 |
| (To record the purchase of foreign currency) | | | |
| Balance sheet date: | Foreign exchange loss | 4,300 | |
| | Foreign currency (DM) | | 4,300 |
| and | Accounts payable | 4,300 | |
| | Foreign exchange gain | | 4,300 |
| (To reflect the impact of exchange rate change) | | | |
| Payment date: | Accounts payable | 386,000 | |
| | Foreign currency (DM) | | 386,000 |
| (To record payment to exporter) | | | |

Note that the cost of imports purchased does not change as a result of exchange rate changes because it is determined at the time resources are committed to purchase foreign exchange spot to hedge against exchange rate changes.

If exchange rate gains and losses are not to be recognized, the following journal entries could be made:

| | | | |
|---|---|---|---|
| Transaction date: | No entry or only memorandum entry for purchase commitment | | |
| | Foreign currency | \$390,300 | |
| | Cash | | \$390,300 |
| (To record the purchase of foreign currency) | | | |

| | | | |
|---|---|---|---|
| Balance sheet date: | No entries | | |
| Payment date: | Purchases | 390,300 | |
| | Accounts payable | | 390,300 |
| | Accounts payable | | 390,300 |
| | Foreign currency | | 390,300 |

(To record the purchase of goods and payment to exporter)

If the foreign currency commitment to the exporter is hedged by entering into a forward contract, no journal entries would be necessary until both transactions are consumated. If exchange rate gains or losses are to be recognized, however, journal entries must be made at the time of commitment. Assume the U.S. importer buys DM 1 million forward at $.3923. Based on our discussion of the theory of foreign exchange, the importer may enter into a forward contract at a higher exchange rate if interest rate differentials make such an action more profitable. The following journal entries could be made:

| | | | |
|---|---|---|---|
| Commitment date: | Purchases | $390,300 | |
| | Accounts payable | | $390,300 |
| | Contracts receivable (DM) | 390,300 | |
| | Premium on forward contracts | 2,000 | |
| | Contracts payable ($) | | 392,300 |

(To record the purchase of merchandise and currency commitment)

| | | | |
|---|---|---|---|
| Balance sheet date: | Accounts payable | 4,300 | |
| | Foreign exchange gain | | 4,300 |
| | Foreign exchange loss | 4,300 | |
| | Contracts receivable | | 4,300 |

(To record the impact of the exchange rate change)

| | | | |
|---|---|---|---|
| Payment date: | Contracts payable | 392,300 | |
| | Cash | | 392,300 |
| | Foreign currency | 386,000 | |
| | Contracts receivable | | 386,000 |
| | Accounts payable | 386,000 | |
| | Foreign currency | | 386,000 |

(To record the delivery of currencies to consumate all transactions)

The premium on forward contracts should be amortized and reflected in the income statement. As the journal entries indicate, in all cases, including the speculative case illustrated earlier, the

value of merchandise imported is established by the spot exchange rate prevailing at the commitment date. This is in keeping with the fundamental principle of accounting that the cost of an asset is the cash outlay (or its equivalent) necessary to acquire the asset. The only question that arises in applying this principle to the cases presented is whether the "passing-of-title" rule should be observed. Given the assumption that the commitments are uncancelable, the expectation is that transactions will be followed through, and, therefore, strict adherence to the "passing-of-title" rule would not be a realistic approach to recording the transaction. This would then require that where the hedged transaction is *not* recorded until the payment date, the value of imports be recorded at the spot rate prevailing on the commitment date. The journal entries under such a case would be as follows:

| | | | |
|---|---|---|---|
| Commitment date: | No entries | | |
| Balance sheet date: | No entries | | |
| Payment date: | Purchases | \$390,300 | |
| | Accounts payable | | \$390,300 |
| | Accounts payable | 390,300 | |
| | Premium on forward contract | 2,000 | |
| | Cash | | 392,300 |

(To record purchases and payments of currencies)

Even though the ultimate effect on cash flows is the same regardless of when the transaction is recorded, the effect on the financial statements prepared before the commitments are consumated is not the same. For this reason, the more detailed approach where the transaction is recorded on the commitment date and offsetting foreign exchange gains and losses are shown on balance sheet dates may be preferable.

## CONCLUDING NOTE

This paper has argued that the present accounting treatment of forward exchange contracts as prescribed by FASB Statement No. 52 is incompatible with the theory of forward exchange markets and with generally accepted accounting principles. It has attempted to demonstrate this point by subjecting several key provisions of the statement to close scrutiny within the framework of the theory of forward exchange markets and the established principles of accounting.

The results of the analysis indicate that a coherent analytical approach to the accounting of forward exchange contracts would suggest a different treatment from that sanctioned by the Financial Accounting Standards Board. The suggested new treatment has been discussed and illustrated by means of journal entries.

# *The Accounting Environment and Some Recent Developments in Turkey*

NASUHI I. BURSAL*

Publications on accounting problems in Turkey which have been brought to the attention of the international accounting community to date consist of a few articles in international journals[1] and of some doctoral dissertations in the United States and in Europe.[2] These studies generally begin by stressing the absence of an organized public accounting profession in Turkey, expand on the deficiencies in accounting practice and education, and close with recommendations to improve the existing situation.

Turkey is excluded from almost all important comparative international accounting surveys.[3] This may be due mainly to the

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The author expresses his appreciation to Professor Richard V. Northrup for his valuable comments concerning this paper; to Professors Frederick D. S. Choi and Vinod B. Bavishi for permission to use the format of their international survey; and to Professor Yucel Ercan, who conducted the survey in cooperation with Research Assistants Sema Ulker and Lerzan Kavut.

[1] See Pekin Ogan, "Turkish Accountancy: An Assessment of Its Effectiveness and Recommendations for Improvements," *International Journal of Accounting* (Fall 1978), 133-47; and Turgut Var, "The Current Accounting Education and Practice in Turkey," *International Accountant*, no. 4 (1976), 8-12.

[2] Erkut Goktan, "The Present and Potential Role of Accounting in the Economic Development of Turkey" (Ph.D. dissertation, University of North Carolina, 1968); and Erol Tumer, "An Investigation of the Present and Potential Role of Financial Accounting in the Capital Market in Turkey" (Ph.D. dissertation, University of Illinois at Urbana-Champaign, 1972).

[3] The only exception is cited in Jeffrey S. Arpan and Lee H. Radebaugh, *International Accounting and Multinational Enterprises* (Boston: Warren, Gorham and Lamont, 1981), 39; Hani Mahmoud Abu-Jbarah, "A Subentity Basis for Financial Reporting in Multinational Firms: A Cluster Analysis Approach" (Ph.D. dissertation, University of Wisconsin, 1978), 98. In this survey, Turkey is classified in cluster number 2.

lack in Turkey of professional organizations which would have provided the necessary information for such comparative surveys. The fact that relatively few multinational corporations are engaged in business activities in Turkey may also have contributed to this lack of interest and knowledge.

Despite, or rather because of, all the shortcomings in its accounting practice, Turkey is a rapidly developing country which has a number of instructive topics to offer to the international accounting community. The circumstances affecting the practice of accounting in Turkey have been changing considerably, especially over the last decade. Accounting is continuously confronted with new problems and challenges and attempts to cope with them by experimenting with a variety of new practices. The pressure of economic events has already led to regulation of the capital market and will ultimately lead to the formal organization of the Turkish accounting profession, as well as the introduction of public auditing.

The main purpose of this paper is to outline the environmental factors affecting the Turkish accounting practice within a framework generally used in comparative international accounting studies. Changes in the accounting environment over the last few decades will be identified and some significant accounting problems related to this development will be discussed. Finally, the comparative international survey framework suggested by Choi and Bavishi[4] will be extended to Turkey to facilitate future studies.

## SOCIOCULTURAL FACTORS

Factors determining the sociocultural environment of accounting in a nation include the attitude of the citizens to business and government in general, and to accounting in particular. Some moral values and behavioral aspects are relevant in this context.

### Supremacy of State and Society

The supremacy of the state and society over individuals was one of the important characteristics of the Ottoman Empire.[5] After the establishment of the Turkish Republic (1923), this "father image" of the state has, in essence, continued. Interventions by the state into the economic and social life of Turkey are generally

[4] Frederick D. S. Choi and Vinod B. Bavishi, "Financial Accounting Standards: A Multinational Synthesis and Policy Framework," *International Journal of Accounting* (Fall 1982), 159-83.

[5] Ilter Turan, "Stages of Political Development in the Turkish Republic" (Paper presented at the Third International Congress on the Economic and Social History of Turkey, Princeton University, 1983), 46.

expected and accepted by the public, although different political parties may have divergent policies concerning the extent of this intervention.

**Attitude toward Business**

The attitude of the Turkish people toward business experienced a drastic change after the founding of the republic. The most preferred professions during the Ottoman Empire were public service or the military, with lower-rated business activities generally left to minority groups. Today, engaging in business is one of the top-ranked professions in Turkey. Upgrading business in the public mind and forming a new generation of entrepreneurs and managers have been notable sociocultural changes over the last few decades.

**Attitude toward Accounting**

The attitude toward the accounting profession is closely related to the function expected from this profession. Without an organized profession and public auditing, accountants have been largely considered to be scorekeepers protecting the interest of the firm's owners in compliance with the existing laws and regulations. The establishment of a capital market and the introduction of public auditing will bring a drastic change to the economic function and social status of the accountants.

**Moral Values**

Some basic moral values and attitudes, such as fatalism, distrust, and secrecy, of the public and of the business community may have affected the development of economic activities in Turkey to a certain extent. Corporations founded as family enterprises were reluctant to go public and share their control and earnings as long as they could raise borrowed capital and benefit from the leverage factor. This tendency and the reluctance of the public to invest in securities delayed the formation of the capital market for many years.

**Political Factors**

Political and legal factors are very influential in shaping the environment of the accounting practice and profession, especially in a developing country such as Turkey.

**Centralized Political Power**

Centralized political power providing the legislation and the government with the authority for extensive interventions in economic and social life has been one of the main characteristics of the

Turkish political system.[6] The interventions range from the regulation of foreign trade, the banking system, and capital markets to the establishment of state-owned economic enterprises.

### Party Politics

The extent of the political intervention into economic life depends on the economic policy of the political parties in power. The single party system during the first three decades (1923 to 1950) of the Turkish Republic represented the state-supported organization and development of the economy. A combination of state-owned basic industries and private enterprises, a "mixed economy," characterized this first period. Later, the introduction of multiparty democracy (1946) brought the first liberal-capitalistic–oriented party into power for nearly ten years (1950). The year 1961 marks the beginning of a planned economy in the country. Five-year plans, prepared by the State Planning Office and approved by the Parliament, represent mandatory plans for state-owned enterprises and guidelines with special incentives for the private sector. Two parties with divergent economic policies have been in power during the last two decades. One, the Justice Party, relied heavily on the private sector and market economy but still reserved a relatively important function for the public sector. The other, the Republican People's Party, favored a larger intervention of the public sector into economic activities and expected the private sector to work in compliance with the objectives of the five-year plans. A new party, Homeland Party, which came to power at the end of 1983, seeks to begin an unprecedented era of free-market economy in Turkey, with reorganization of the state bureaucracy, elimination of restrictions imposed on the market economy, and even the sale of state-owned enterprises, toll bridges, and power stations to the public.

### Political Stability

Disturbances in the country's political stability had a considerable impact on economic activities during the last decade. Political terrorism increased the uncertainty for long-term economic decisions. Frequent changes in the political power ranks, combined with favoritism for special interest groups, caused the federal budget to be violated and led to triple-digit inflation, distorting the economic proportions.

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[6] Ibid., 48.

## LEGAL FACTORS

The most influential factors affecting the Turkish accounting practice over the last sixty years have been the legal requirements, anchored mainly in Tax Procedure Law[7] and Commerce Law, as well as in some related social legislation. The Capital Market Law represents the latest element in this legal framework.

### Tax Legislation and Commerce Law

In the absence of generally accepted accounting principles, legal requirements have constituted the main basis for accounting practice. Financial reporting had to satisfy the needs of different groups of users of accounting information within the constraints of this legal framework. The lower limit for asset valuation and income determination is set by tax regulation to protect the interest of the treasury. On the other hand, the provisions of the Commerce Law aim to prevent the overvaluation of assets and the overstatement of income to protect the interests of creditors. In the absence of public auditing, investors have had to rely also on financial reports based on legal requirements. A general conception in Turkey is that three different sets of financial statements must be prepared: one for tax purposes, disclosing the lowest level of income as possible; a second for bank loan applications, demonstrating the best possible financial situation and performance; and a third for the owners disclosing the "real" situation of the company.

The only auditing function for the private sector exercised over the last sixty years has been the "statutory auditing" prescribed by the Commerce Law for corporations with common stock. Auditors selected by the General Assembly of Stockholders must submit an annual audit report confirming that the financial statements have been prepared according to sound accounting procedures, based on sufficient documented evidence and in compliance with the related legal requirememts. Since the selected auditors generally were persons closely related to owners or directors of the corporations, the audit reports were in most cases a "matter of formality" rather than auditing reports in the proper sense.

On the other hand, internal auditing has always been a legal requirement for state economic enterprises, as well as for financial institutions. However, the function of these auditors covers a larger area than accounting. Banks and insurance companies are also

[7] The income tax system introduced in 1950 consists of three laws: (1) income tax law — taxation of individual income; (2) corporate tax law — taxation of corporate income; and (3) tax procedure law — regulation of tax procedures including rules for asset valuation, expense, revenue recognition, etc.

audited by special auditors designated by the Ministry of Commerce.

The dominance of legal requirements is also reflected in the extensive employment of "independent fiscal consultants," experienced accountants with a broad background in related legal requirements. A large number of these consultants are former employees of the Ministry of Finance who worked as tax controllers checking the tax returns and financial statements filed by the companies.

Even the long delay in the establishment of an organized accounting profession with public auditing can partially be traced to legal considerations. The first draft of a bill providing legal status to the accounting profession had been introduced to Parliament as early as 1937. However, since this proposal also included certain provisions granting accountants the right to represent their clients in matters concerning accounting before the court, it has always met strong opposition from lawyers, who are heavily represented at different stages of the legislative process. An earlier organization of the Turkish accounting profession could certainly have contributed to the improvement of accounting practices and prepared for the development of a national capital market. On the other hand, it may be argued that the economic and social development of the country had not reached a requisite level to exercise enough pressure for the regulation of accounting practice.

### Capital Market Law

Pressure has in fact been strongly felt during the last years and led to the introduction of Capital Market Law in late 1981. The following is a brief summary of the new provisions of this law, which will have a direct and lasting impact on the Turkish accounting practice and profession.

1. The main objective of the law is the regulation of the capital market. A Capital Market Board (CMB), consisting of seven members appointed by the government and similar to the Securities and Exchange Commission in the United States, has been established. All corporations offering equity and debt securities to the public, as well as all intermediary institutions dealing with securities, must register with the CMB. The CMB's expenses are to be funded by contributions of corporations calculated at .3 percent of the amount of securities issued.
2. The law introduces, for the first time, registered or authorized capital in the Turkish accounting practice. Corporations now have

the possibility of issuing new stock within the limits of the authorized capital stated in their charters without asking for permission of the Ministry of Commerce, as had been the case previously.

3. For the first time, a mandatory financial disclosure requirement is a part of the Turkish accounting practice. Previously, only financial institutions were required to publish their annual financial statements. According to the new law, all publicly held corporations and intermediary security dealers must file their annual financial reports with the CMB and publish their annual financial statements in a uniform format. The required format has some basic similarities with the formats used in U.S. practice and also includes explanatory footnotes disclosing the accounting principles and methods applied in the preparation of the statements.

4. The determination and pronouncement of accounting standards to be observed in financial reporting are also included among the main functions of the CMB. So far, only formal requirements have been issued. A certain uniformity in the format of the financial statements presented for bank loan applications had already been achieved as early as 1963. The Turkish Banking Association in that year established the requirement that for loan applications, the financial statements of the last three years be submitted in a given format.

5. The law requires that financial reports be audited and states also for the first time the format and wording of the unqualified audit opinion as follows:

> I (we) have audited the accounts and transactions of the corporation. . . for the period of 1.1.19.. to 12.31.19.. according to the Turkish Commerce Law, to the charter of the corporation and to other legislation as well as to generally accepted accounting principles and standards. In my (our) opinion the enclosed balance sheet as of 12.31.19.. of which I (we) have accepted the content does reflect the real financial situation of the corporation and the income statement covering the period from 1.1.19.. to 12.31.19.. reflects the real financial results, and the proposed distribution of earnings is in compliance with legal requirements and with the charter of the corporations.

The audit opinion includes for the first time the term "generally accepted accounting principles and standards." This leads one to believe that the pronouncement of accounting standards and their enforcement by public auditors are the next important steps to be expected in the development of the accounting practice and the profession in Turkey.[8]

[8] Capital Market Law, Number 2499 (30 July 1981); Regulation Number 2 (13 February 1983).

**Social Legislation**

Aside from this legislation, the provisions of the Labor Law concerning the seniority indemnity (amended version, 1975) have caused serious problems for the accounting practice over the last few years. The following are the main requirements of this law:

1. The employers must pay their employees seniority indemnity in case of the termination of the employment relationship or in case the employee prefers to leave after reaching legal retirement age.
2. The amount of the indemnity is calculated by multiplying the last monthly salary with the number of years the employee has been employed by the firm. The monthly salary to be used as the basis cannot, however, exceed seven and one-half times thirty days' minimum wage.
3. Seniority indemnities can be expensed and considered as tax deductible only at the time of their actual payment. Accrual of allowances for estimated future indemnities is not tax deductible. Employers are not permitted to make funding arrangements with insurance companies.
4. The law also contains a provision that a seniority indemnity fund be established at the Ministry of Labor or another institution designated for this purpose. The employers will in this case be required to pay monthly contributions to this fund. As of June 1985, this fund had not yet been established.

The delay in the establishment of this fund has imposed a heavy financial burden on Turkish employers, the extent of which can hardly be estimated. The high rate of inflation continually increases the burden of the unfunded indemnity obligations and distorts all financial statements. The severity of the issue can perhaps be better understood if one recalls the current problems regarding the disclosure of already funded pension benefits in the United States.

The fact that this problem has become so important has much to do with the change in the assumed function of the seniority indemnity. Since Turkey has no unemployment insurance, the indemnity was first considered as a lump-sum unemployment benefit. Later, the amount of the indemnity was increased to provide a penalty to discourage employers from economically unjustified lay-offs. In the final stage, it assumed the character of a lump-sum retirement benefit in addition to the regular monthly benefits paid by the Social Insurance Administration. Another view, generally represented by trade unions, is that this indemnity is a postponed part of regular labor cost.

This issue has been one of the most controversial regarding Turkish accounting practice over the last decade. Although not tax deductible, special indemnity expense allowances based on actuarial calculations have begun to be recognized by a number of companies. Several companies either failed or changed their legal status to avoid or lessen their financial burden. In any case, the seniority indemnity issue in Turkey is an example of the impact of political decisions and legal factors on the financial conditions of companies in general and on the accounting practice in particular.[9]

## ECONOMIC FACTORS

The stage of economic development, the relative size of the private and public sector, the stability of the economy, and the international ties of the country are the most important factors shaping the Turkish accounting environment.

At the beginning of the republic (1923), Turkey was basically a rural economy without notable industry, sufficient capital accumulation, skilled work force, and experienced entrepreneurs. Therefore, as mentioned earlier, all efforts and capital of the state were directed to the creation of an infrastructure, establishment of basic industries, and improvement of the general level of education. The private sector was granted several investment incentives and protected from foreign competition by import restrictions and high customs duties. The transformation of a rather closed rural economy to a market economy and the development of protected industry oriented to the domestic market with a predominant share of state ownership were the main characteristics of the Turkish economy until the beginning of the 1950s. The structure of the economy has undergone drastic changes over the last thirty years, confronting the accounting practice with new problems and challenges.

### Structural Change

The most significant structural change is the rapid increase of the share of industry within the gross national product (GNP). As reflected in exhibit 1, the share of agriculture in the GNP has fallen from 38.2 to 19.6 percent, whereas the share of industry has increased from 17.4 percent to 28.2 percent over the last twenty years. The rise in the share of the service sector from 44.4 to 52.2 percent is noteworthy.

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[9] The establishment of a seniority indemnity fund seems to be on the priority list of the present government.

**Exhibit 1. Shares of Main Sectors at the GNP at Current Prices (In percentage)**

| | 1960 | 1965 | 1970 | 1975 | 1980 | 1981 | 1982 |
|---|---|---|---|---|---|---|---|
| Agriculture | 38.2 | 31.1 | 26.7 | 26.0 | 21.2 | 20.6 | 19.6 |
| Industry | 17.4 | 20.3 | 21.3 | 21.0 | 25.3 | 27.0 | 28.2 |
| Services | 44.4 | 48.6 | 52.0 | 53.0 | 53.5 | 52.4 | 52.2 |
| | 100.0 | 100.00 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

**Source:** State Statistic Institute.

**Exhibit 2. Composition of Exports (In percentage)**

| | 1965 | 1970 | 1975 | 1980 | 1981 | 1982 |
|---|---|---|---|---|---|---|
| Agriculture | 75.9 | 75.2 | 56.6 | 57.4 | 47.2 | 37.3 |
| Industry | 19.6 | 17.1 | 35.9 | 36.0 | 48.7 | 59.7 |
| Mining | 4.5 | 7.7 | 7.5 | 6.6 | 4.1 | 3.0 |
| | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

**Source:** State Statistic Institute.

The structural change in the economy is also reflected in the composition of exports. Exhibit 2 indicates that the share of agricultural products within the total exports declined from 75.9 to 37.3 percent over the same period, while the share of industrial products rose from 19.6 to 59.7 percent. This structural change has been the main force behind the rapid growth rate of the Turkish economy, especially in the late 1960s and early 1970s. With annual growth rates of 7 to 8 percent, the country ranked among the fastest growing economies of the world.

### Inflation and Foreign Exchange Rates

The financial sources of this rapid expansion, however, were not always solidly based. Private and public savings were not sufficient. Chronic budget deficits, accelerated by the election-oriented ambitions of the leading political parties, weakened the monetary system and led to triple-digit inflation rates combined with frequent foreign currency shortages and devaluation of the Turkish currency.

Exhibit 3 reports the extent of the inflation. The annual inflation rate, fluctuating round 25 percent until 1978, jumped to 52.6 percent in 1978 and reached its peak at 107.2 percent in 1980. The beginning of 1980 marked the initiation of the new anti-inflation policy of the government. The impact of high inflation on foreign exchange rates is of special importance for Turkey

**Exhibit 3. Wholesale Price Index (1963 = 100)**

| Year | Index | Annual change (Percentage) |
|---|---|---|
| 1973 | 240 | — |
| 1974 | 312 | 30.0 |
| 1975 | 343 | 10.9 |
| 1976 | 397 | 15.7 |
| 1977 | 492 | 23.9 |
| 1978 | 751 | 52.6 |
| 1979 | 1.231 | 63.9 |
| 1980 | 2.551 | 107.2 |
| 1981 | 3.488 | 36.7 |
| 1982 | 4.369 | 25.2 |
| 1983 | 5.708 | 30.6 |

**Source:** Statistics of Turkish Ministry of Trade.

**Exhibit 4. Dollar Exchange Rates in Turkish Pounds**

| Year | Year-end rate in Turkish pounds | Index |
|---|---|---|
| 1972 | 14.00 | 100.0 |
| 1973 | 14.00 | 100.0 |
| 1974 | 14.00 | 100.0 |
| 1975 | 15.00 | 107.0 |
| 1976 | 16.50 | 118.0 |
| 1977 | 19.25 | 137.5 |
| 1978 | 25.00 | 178.6 |
| 1979 | 47.10 | 336.4 |
| 1980 | 70.00 | 500.0 |
| 1981 | 127.13 | 907.0 |
| 1982 | 180.86 | 1,293.0 |
| 1983 | 280.00 | 2,000.0 |

**Source:** Statistics of Turkish Central Bank.

because approximately 95 percent of total imports still consists of industrial raw materials and investment goods. Price increases in the country are, therefore, partially a consequence of this "imported" inflation effect.

As depicted in exhibit 4, the exchange rates for the U.S. dollar were kept fixed or at relatively low levels despite the high inflation until 1978. It is remarkable that the interest rates were also kept artificially low during the same period. In times of annual inflation rates of 70 to 80 percent, the official interest rates for commercial loans and bonds generally did not exceed 20 percent, and those

for one-year term savings deposits were below 10 percent. This policy largely accelerated the heating of the economy and led to the development of a black capital market.

The new economic policy introduced in 1980 and enforced since then with increasing emphasis on free market economy brought radical changes in the government's monetary, foreign trade, and interest policies. A tight money and credit policy, as well as the adjustment of foreign exchange and interest rates to the prevailing rate of inflation, have been the cornerstone of the recent economic policy. As a result, interest rates for one-year term savings deposits jumped to approximately 50 percent, the interest for commercial loans to approximately 60 percent. The target of the government for 1984 seems to be keeping the inflation rate below 50 percent.

High inflation, combined with strict import and foreign currency restrictions experienced for many years, has understandably impacted accounting practice significantly. The main effects of inflation on accounting, reflected in the form of distortion of financial statements and of reported income, are already widely known. Therefore, only some specific topics which arose in conjunction with inflation, aggravating its effects and causing special accounting problems, will be noted here.

The income tax brackets and rates were not adjusted for the high inflation rates for many years. This lag magnified the tax burden, especially for low income taxpayers. Average salaries subject to a tax rate of approximately 25 percent, according to the original tax tariff, were taxed up to 65 percent at inflated amounts, although their purchasing power was less than before. This additional effect deteriorated the national tax morality which was not on a high level in the first place, and enhanced the motivation for tax evasion. Unrecorded purchases and sales transactions, use of overstated, fictitious purchase invoices, understated sales invoices with off-book cash collections and off-book wage payments without tax, and social insurance contribution withholding became widespread. The tax rates were adjusted in the late 1970s, but were not able to keep abreast of the continuing inflation.

Strict import and foreign currency restrictions also had several deteriorating effects on accounting practice. One of them is the "double payment" of foreign debts. Most notably, manufacturing companies that depend on imported raw materials were not able to transfer the amount of their purchases because of delays of months, or even years, in the official transfers of the foreign exchange amounts by the Central Bank. To secure an uninterrupted

supply, some companies began paying their foreign debts with foreign exchange provided by the black market, without waiting for the official transfer.

Drastic changes in foreign exchange rates resulted in some severe accounting problems as well. Manufacturing plants financed with long-term foreign credits had to adjust their investment costs and related depreciation expenses frequently. Many factories, established years ago, still had outstanding foreign currency debts exceeding the initial amounts of their investments expressed in Turkish currency. This procedure could in one respect be considered as an inflation adjustment for fixed assets. On the other hand, these frequent surges in liabilities to foreign creditors adversely affected the debt/equity ratios and increased the need for equity financing.

Foreign exchange rate differences caused similar problems for current import transactions. In the case of the devaluation of the Turkish pound, import companies had to disburse the rate difference even if the goods had actually been imported and sold, presumably at prices based on prior exchange rates. The main issue here was whether rate differences had to be considered as part of the purchasing cost or reported as a financial loss of the period. Companies favored the cost treatment, whereas the tax regulations considered these differences as a financial loss regardless of the quantity of goods sold in the current period, which would eventually represent a tax advantage for the companies. Providing a guarantee for exchange rate differences has been a major issue for many years.

These developments did not permit sound accounting practices, and called for inflation-adjustment measures. The need for such adjustment had already been evident in the early 1960s. A provision added to the Tax Procedure Law in 1963 provided for the possibility of the restatement of fixed assets using factors to be determined by the Ministry of France. Due to some controversial arguments concerning the inflation adjustment, in part politically motivated, these restatement factors could not be determined for twenty years. The recent regulation (1983) relating to inflation adjustment prescribes the factors for the restatement of the fixed assets purchased during the period 1972 to 1982 as reported in exhibit 5.

The new regulation offers companies the possibility of restating the fixed assets included in their financial statements for the year 1982. The same factor must be applied on the acquisition cost, as

**Exhibit 5. Inflation Adjustment Factors for 1982**

| Year | Official adjustment factors | Factors based on wholesale price index |
|---|---|---|
| 1972 | 11 | 21.9 |
| 1973 | 10 | 18.2 |
| 1974 | 9 | 14.0 |
| 1975 | 8 | 12.7 |
| 1976 | 7 | 11.6 |
| 1977 | 6 | 8.9 |
| 1978 | 5 | 5.8 |
| 1979 | 4 | 3.5 |
| 1980 | 3 | 1.7 |
| 1981 | 2 | 1.3 |
| 1982 | 1 | 1.0 |

well as on the accumulated depreciation amount. The difference between the old and the adjusted book values of the assets must be credited to a special "re-evaluation fund account." This amount may be used by corporations to increase the stockholders' equity by issuing new stock which is not subject to taxes. Exhibit 6 clearly indicates the rapid increase in stockholders' equity of existing corporations in 1982, which is largely due to the inflation adjustment made in the same year.

The new regulation is certainly an important step toward restoring the usefulness of the financial statements, which had been fully distorted as a result of inflation over the last decade. With this more realistic valuation of their assets, corporations may now be more willing to offer stock to the public. The increase in stockholders' equity will also allow them to raise more investment capital on the bond market. As exhibit 5 indicates, however, most of the official restatement factors are much lower than the factors calculated on the basis of the wholesale price index. The fact that the inflation adjustment can be applied only once also limits its impact. As long as inflation cannot be brought under control, accounting practice must face similar problems in the future as well.

#### Sources of Funds

As mentioned earlier, most of the closely held corporations have not been eager to go public as long as they could benefit from the financial leverage accentuated by abnormally low interest rates during the high-inflation period. With skyrocketing inflation cou-

**Exhibit 6. Development of Corporations**

| Year | New established corporations | | | | Increase of stockholders' equity | | | |
|---|---|---|---|---|---|---|---|---|
| | Total | | Joint stock corp. | | Total | | Joint stock corp. | |
| | Number | Capital (In bil. Tur. pounds) | Number | Capital (In bil. Tur. pounds) | Number | Capital (In bil. Tur. pounds) | Number | Capital (In bil. Tur. pounds) |
| 1965 | 1950 | 0.39 | 84 | 0.14 | 257 | 0.410 | 49 | 0.31 |
| 1970 | 3880 | 1.46 | 248 | 1.05 | 442 | 2.21 | 146 | 2.08 |
| 1975 | 5303 | 3.65 | 745 | 2.59 | 674 | 6.91 | 377 | 6.59 |
| 1976 | 7398 | 6.73 | 1277 | 5.09 | 886 | 10.16 | 512 | 9.74 |
| 1977 | 8021 | 8.98 | 1651 | 7.02 | 1050 | 14.97 | 642 | 14.41 |
| 1978 | 8728 | 10.40 | 1783 | 8.33 | 1044 | 18.03 | 698 | 17.32 |
| 1979 | 7680 | 12.18 | 1915 | 9.70 | 901 | 22.20 | 670 | 21.57 |
| 1980 | 7527 | 19.00 | 2356 | 15.10 | 1275 | 89.99 | 1112 | 88.30 |
| 1981 | 6340 | 43.56 | 2368 | 37.24 | 660 | 42.80 | 528 | 39.23 |
| 1982 | 6579 | 69.05 | 2746 | 57.71 | 1350 | 196.87 | 1109 | 187.11 |

**Source:** State Statistic Institute

pled with adjusted interest and foreign exchange rates, however, they were no longer in a position to secure the additional funds so badly needed. No organized capital market existed which would satisfy their needs and at the same time provide acceptable return and safety for the investors. Nevertheless, the issuance of corporate stocks and bonds showed a remarkable increase after 1979, as reported in exhibit 7. The number of newly established corporations also increased considerably after 1975 (exhibit 6), reflecting the development taking place on the capital market.

The issuance of stock has generally accompanied the formation or expansion of "holding corporations," a top-level parent corporation holding majority shares in affiliated corporations. The emergence of holding corporations, some of them also including financial institutions, such as banks and insurance companies, represents one of the important recent developments in the Turkish capital market. Apart from the general purpose of providing funds and exercising control over affiliated corporations, two specific factors led to the widespread use of this form of organization. One was the possibility for the stockholders of the old corporations to bring their shares at "appraisal value" into the new parent corporation without paying any taxes. The other reason was that, by the creation of a chain of affiliated corporations, the income tax burden could be postponed for a number of years.[10] With respect to their effect on accounting practice, the formation of holding corporations has increased the complexity of financial transactions,

**Exhibit 7. Corporate Bond and Stock Issues (In bil. Turkish pounds)**

| Year | Stocks | Bonds |
|---|---|---|
| 1977 | 2.89 | 1.58 |
| 1978 | 3.77 | 2.20 |
| 1979 | 7.12 | 4.87 |
| 1980 | 21.92 | 18.01 |
| 1981 | 25.31 | 15.98 |
| 1982 | 109.52 | 13.25 |
| 1983 | 95.90 | 16.34 |

**Source:** Statistics of Turkish Central Bank.

[10] After the calculation of the corporate tax, corporations were required to withhold 15 to 20 percent as an advance collection of income taxes for their individual shareholders. Corporate shareholders were exempt from this withholding. Their income could be taxed only when transferred to the shareholding corporation, which generally occurred during the following year.

and especially put the consolidation topic on the agenda of the accounting profession.

Some large holding corporations also included banking institutions. The affiliation of major banks in Turkish corporations has been one of the most important sources in financing the rapid growth of the private sector. In addition to their direct participation, banks have also provided extensive credits to their affiliates, mostly at favorable terms.

The development of the Turkish bond market during the last few years is closely related to the operations of the "bankers" who emerged on the market to establish the missing link between corporations and private investors. Because underwriting was not permitted legally, these "bankers" purchased corporate bonds bearing 30 to 35 percent interest at much less than their par value (at 70 to 80 percent) and offered investors a higher return than the 50 percent bank interest for one-year deposits. Turkish private investors learned of the close relationship between high return and high risk through costly experiences. Most of these "bankers" went bankrupt, leaving behind huge amounts of accrued interest payable. This development led to the introduction of the Capital Market Law previously discussed.

In addition to the disclosure requirements already mentioned, the Capital Market Law opened the way to use more diversified sources of capital than had been available earlier. The Turkish accounting profession will, therefore, need to deal with much more complex capital transactions. A wider use of convertible securities may be expected, depending on the development of inflation and interest rates. Problems related to bond discounts and premiums, as well as to early redemption of bonds, may also develop in this context. Further, long-term financial investments of corporations may result in a wider application of consolidated statements using the equity method.

**Shares of Private and Public Sectors**

The relationship of the private and public sectors within the whole economy is also a factor affecting the economic environment of accounting. The scope and importance of the state economic enterprises (SEEs) during the first period of the Republic have already been mentioned. The development of the economy over the last decades has increased the number of private firms; in addition, they operate in much more diversified areas than do the SEEs. However, the SEEs still hold a dominant share in transportation, communication, mining, energy, banking, insurance, and

other basic industries, such as steel, cement, paper, refineries, petrochemicals, sugar, and heavy machinery.[11] Exhibit 8 indicates that the share of the public sector within total fixed capital investments has increased from 46.9 percent to 58.8 percent over the last ten years. Further, statistics of the Social Insurance Administration reveal that approximately one-third of all workers covered by this insurance are employed in the public sector.

As to the sectoral distribution of public investments, exhibit 9 reveals that energy, manufacturing, transportation (which includes

**Exhibit 8. Relative Shares of Public and Private Sectors in Total Fixed Capital Investment (%)**

| Year | Public fixed inves. | Private fixed inves. |
|---|---|---|
| 1973 | 46.9 | 53.1 |
| 1974 | 48.0 | 52.0 |
| 1975 | 50.4 | 49.6 |
| 1976 | 51.5 | 48.5 |
| 1977 | 55.4 | 44.6 |
| 1978 | 48.2 | 51.8 |
| 1979 | 49.7 | 50.3 |
| 1980 | 55.8 | 44.2 |
| 1981 | 60.9 | 39.1 |
| 1982 | 58.8 | 41.2 |

**Source:** Statistics of State Planning Organization.

**Exhibit 9. Sectoral Distribution of Fixed Capital Investments (in %)**

| | Public | | Private | | Total | |
|---|---|---|---|---|---|---|
| Sectors | 1981 | 1982 | 1981 | 1982 | 1981 | 1982 |
| Agriculture | 9.5 | 11.0 | 12.0 | 12.6 | 10.5 | 11.6 |
| Mining | 9.6 | 9.3 | 0.7 | 0.7 | 6.1 | 5.8 |
| Manufacturing | 24.3 | 18.8 | 29.0 | 28.3 | 26.2 | 22.7 |
| Energy | 28.8 | 23.7 | 0.7 | 0.7 | 14.7 | 14.2 |
| Transportation | 17.7 | 18.9 | 22.5 | 23.5 | 19.5 | 20.8 |
| Tourism | 0.5 | 0.8 | 0.8 | 0.9 | 0.6 | 0.8 |
| Housing | 2.3 | 2.1 | 29.7 | 28.3 | 13.0 | 12.9 |
| Education | 3.9 | 4.3 | 0.2 | 0.2 | 2.5 | 2.6 |
| Health | 1.9 | 2.1 | 0.2 | 0.2 | 1.2 | 1.3 |
| Other services | 6.5 | 9.1 | 4.5 | 4.5 | 5.7 | 7.2 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

**Source:** Statistics of State Planning Organization.

[11] Since most SEEs are providing raw material and other basic inputs to related industries, their prices affect production costs of many other manufacturing industries.

communication) and mining had the largest shares during 1981 and 1982.

Because of their dominant role in the economy, the SEEs also have had an important impact on the accounting practice in the country:

1. A special High Auditing Board (HAB) is in charge of the annual auditing of the SEEs. Teams of HAB staff members are assigned to different SEEs to report on the operational performance and financial results of these institutions. The reports include a detailed analysis and evaluation of the operations, as well as recommendations for improvement. After being discussed and finalized by the HAB, reports are submitted to the Parliament for study and approval by a special committee.
2. The reorganization of the SEEs to improve their efficiency and profitability, with special emphasis on eliminating the influence of political parties on their operations,[12] has always been a key issue. In the course of reorganization efforts initiated in the early 1960s, a uniform chart of accounts with guidelines for financial reporting was developed and officially introduced by the SEEs in 1972. This uniform chart of accounts has in many cases served as a model for the private sector. Further, in the absence of an organized accounting profession, the practices of the SEEs and the transfer of a large number of experienced accountants from the SEEs to the private sector have been significant contributions by the SEEs to the development of Turkish accounting practice.

**International Ties**

The international economic ties of a country have considerable impact on the accounting environment. Activities of multinational corporations and the relationship of the country to formal international or regional groups are the most significant factors considered in this context.

Although foreign capital investments have been encouraged by a rather liberal Foreign Capital Law (1954) during the last three decades, such investments have barely reached a level to have a notable effect on the economy. State bureaucracy and divergent attitudes of the political parties toward foreign capital were the main reasons for the reluctance of foreign investors. The account-

[12] A new law brought significant changes regarding the investment, financing, and management policies of the SEEs (Law Number KHK 60, 20 May 1983). A clear distinction is made between profit-oriented and public service-oriented enterprises, yet a special Parliamentary commission still has the final word for the approval of the SEEs' audit reports.

ing systems applied by foreign companies operating in Turkey, however, had some indirect effect on the Turkish accounting practice. Affiliates of U.S. and U.K. corporations prepared especially for the establishment of the first public auditing firms in Turkey to perform audit work for foreign companies. Further, international financial institutions such as the International Monetary Fund, World Bank, and International Finance Corporation as well as foreign banks and suppliers providing project credits, required financial reports in compliance with their standards from their beneficiaries.

Turkey is an associate member of the European Economic Community (EEC) but has not yet applied for full membership. In the case of full membership, Turkish accounting practice would certainly be affected by the harmonization efforts within the EEC, but such development is not very likely during the next few years. Due to the geopolitical importance of its location and its sociocultural advantages, Turkey is presently attempting to build an economic bridge between the Western and Middle Eastern countries. The free-market economy imposed by the recent national government may prepare a more favorable environment for foreign investments and also strengthen the ties with the EEC. Rapid growth of the domestic market, combined with expanding free-market economy, may indeed attract more foreign investments in the future.[13]

In fact, accounting practices will face some new challenges related to the efforts of the present government to open the Turkish economy to foreign markets. These include wide-ranging liberalization of foreign currency regulations and export incentives. Turkish exporters are now allowed to keep up to 20 percent of their export revenues in a foreign currency account abroad or in a Turkish bank. Extensive supports are provided for companies to establish new affiliations or their own subsidiaries abroad to support export activities. Special finance corporations can be established to provide equipment for investments or construction work in foreign countries on long-term credit or on a leasing basis. The most remarkable development in this field, however, is the rapid expansion of the activities of Turkish construction companies in Middle Eastern countries.

[13] The population of the country is presently 51.4 million. With an average annual population growth rate of approximately 2.2 percent, it is expected that Turkey will reach a population of approximately 75 million by the year 2000 and will become the second most populous country in Europe after the USSR.

As reported in exhibit 10, the volume of construction work by Turkish companies was only $3.5 billion in 1980, but reached $14 billion only three years later. It is estimated that approximately 20 percent of this amount is transferred to Turkey in the form of company profits and savings of the Turkish workers engaged in these construction projects. The importance of these amounts can be better evaluated by comparing them with the annual export revenues of the country, which amounted to approximately $6 billion during each of the last two years. The accounting problems that arise as consequence of this development can be summarized as follows:

1. Accounting practice must, for the first time, address foreign currency translation problems with Turkish companies as creditors. This problem will arise primarily in connection with the transfer of foreign subsidiary profits to Turkey and with the valuation of deposits kept in foreign currency accounts. Even the regular transfer of export revenues may now lead to exchange rate differences. In fact, a new regulation allows exporters to record their export revenues as late as three months after the completion of the export transaction so that they may benefit from eventual exchange rate increases. Turkish construction companies are required to record the amount of depreciation expenses of their fixed assets used abroad and the allocated share of the general administrative expenses of their main offices in Turkey, both in foreign currency.
2. A special problem facing the construction companies is the application of the percentage-of-completion method, widely used in Middle Eastern countries, presumably under the influence of

**Exhibit 10. Construction Contracts of Turkish Companies Working Abroad Cumul. Totals in U.S. Dollars**

| Countries | 1980 | 1981 | 1982 | 1983 |
|---|---|---|---|---|
| Libya | 2.346 | 7.100 | 8.167 | 8.565 |
| Saudi Arabia | 0.684 | 1.130 | 3.302 | 4.125 |
| Iraq | 0.430 | 0.728 | 0.952 | 1.031 |
| Jordan | 0.011 | 0.043 | 0.043 | 0.108 |
| U.A. Emirates | 0.035 | 0.039 | 0.039 | 0.039 |
| Kuwait | 0.011 | 0.012 | 0.016 | 0.017 |
| Others | — | — | 0.057 | 0.143 |
| Total | 3.517 | 9.052 | 12.576 | 14.028 |

**Source:** Statistics of State Planning Organization.

international accounting standards or U.S and U.K. practice. Mainly because of tax considerations, Turkish construction companies prefer to use the completed-contract method for their domestic activities; this is a practice quite understandable in an environment of high inflation and interest rate.

3. The consolidation of foreign and domestic activities will be another new problem for the accounting profession. Some large Turkish construction companies doing business abroad have purchased or participated in domestic corporations financially distressed by the tight money and credit policy of the recent governments. This development enhances the importance of consolidation of foreign and domestic activities.

## EDUCATIONAL FACTORS

The level and quality of accounting education are also important factors shaping the Turkish accounting environment. Here again, however, mutual interdependency should be considered. The development of accounting education itself depends largely on the level of the accounting profession and practice in a country. Considering the economic and legal factors mentioned here, one can conclude that accounting education will have a strong legal orientation, with emphasis on the formal and material requirements of the various laws.

This being the general framework, divergent approaches and methods to be found in accounting education can be explained largely by the differing educational backgrounds of the respective instructors or authors.

### Foreign Influence

The differences in the educational background of accounting instructors in Turkey can be divided into three periods during the last sixty years:

1. During the first period before 1926, the French impact on accounting education prevailed. The main reason for this was that the tax and commerce laws of this period reflected a French influence. Furthermore, most of the instructors had been educated either in France or by instructors using the French system.

2. During the second period from 1926 until 1960, the German influence was dominant on accounting practice and education. The new Commerce Law of 1926 was largely influenced by German legislation. Most of the students going abroad went to Germany. The greatest influence came, however, from the German professors

who immigrated to Turkey in the early 1930s, fleeing the Nazi regime in Germany. The first faculty of economics with a special department for business administration was established within the University of Istanbul in 1936.[14] The German approach to business administration was a global one, covering the main functional areas of production, marketing, and finance. Courses in financial and cost accounting were offered at different levels. State economic enterprises employed German consultants for the reorganization of their accounting systems. The essence of this reorganization consisted of creating uniform charts of account similar to the decimal classification in Germany, together with guidelines for its implementation. The introduction of an income tax system based on the German model in 1950 was an additional manifestation of the German influence. The changes in accounting practice were also reflected in accounting education, such that the discussion of the chart of accounts occupied a significant place in Turkish accounting textbooks. Since accounting was conceived as a system providing information for internal purposes rather than for financial reporting to external users, heavy emphasis was placed on cost accounting.

3. The last and current period is characterized by the dominant impact of U.S. accounting practice. U.S. influence had already begun during the 1950s, especially in the course of the 1958 Marshall Plan's economic help programs and with the beginning of U.S. business involvements in Turkey. More and more students were sent to the United States for business education. Special institutions and programs were established to introduce American management theories and practices. The most important of these is the Institute of Business Administration established at the University of Istanbul in 1954. This institute, founded in cooperation with the Harvard School of Business and the Ford Foundation, has contributed significantly to the introduction of American management education to Turkey. The functional approach in curriculum development began to be applied, with courses offered in production, marketing, organizational behavior, finance, and control, and with extensvie use of the case method. Among other institutions introducing the American approach to accounting in Turkey, the Middle East Technical University (in 1956) and the Bosporus University, formerly American Robert College (in 1971),

[14] Professor Alfred Isaac deserves special mention in this context. For almost twenty years, he has contributed extensively to the development of accounting education in Turkey.

should be mentioned. English is used as the medium of instruction at both, and they have special departments for business administration. Some cooperative programs between Turkish and American universities (New York University, Cornell University, and Michigan State University) should also be mentioned in this context. Finally, the reorganization efforts for state economic enterprises have contributed to the increase of the American influence as well. In fact, the uniform chart of accounts and the guidelines for financial reporting prepared for the SEEs, as previously mentioned, were largely based on U.S. prevailing concepts and standards.

### Institutions

Institutions at two different levels are presently engaged in accounting education in Turkey. Special high schools of commerce offer courses in accounting which are merely bookkeeping courses. The purpose of these vocational schools is to train clerical personnel for office work with special emphasis on accounting.

The scope and quality of accounting education at the university level vary among universities.[15] Accounting is offered within faculties of administrative and economic sciences with special departments for business administration. The University of Istanbul is the only university in the country with a separate faculty of business administration. The Institute of Business Administration mentioned previously and a separate Institute of Accounting are related to this faculty. Large universities also offer graduate studies, including MBA and doctoral programs.

### Curriculum

Although the accounting profession in Turkey does not enjoy the high status that it does in the United States and United Kingdom, accounting still occupies the top range in the curriculum of undergraduate business programs.[16] Financial accounting is generally taught in two successive courses extending over a two-year period. After an introduction and overview in the first course, the second course focuses in more detail on adjustments and the preparation of financial statements. Special courses on corporate accounting may also be offered during the second year. Core

[15] Large universities in Istanbul, Ankara, and Izmir used to provide instructors for newly established universities in other parts of the country on a temporary basis. The new Law of Higher Education includes service in other universities as a requirement for promotion.

[16] The author had found in a special study at the Faculty of Business Administration, Istanbul, that accounting courses constituted 23 percent of the four years' teaching load (1979).

courses on managerial accounting, cost accounting, and auditing are included in the programs of the remaining two years. Special courses dealing with accounting problems of different lines of business, such as agriculture, transportation, and construction, as well as accounting organization with emphasis on computer applications, are primarily offered as electives in undergraduate and graduate programs.[17]

The approach and content of accounting textbooks reflect the educational backgrounds of the authors. The differences between German and U.S. educational backgrounds are most clearly seen in the systematic approach to topics, classification of accounts, and, especially, in terminology. Discrepancies in terminology largely stem from differences between the definitions of expenditures, cost, and expense in German and American accounting theory. Accounting instructors select the textbook best suited to their own background for their courses. As mentioned earlier, the impact of American accounting practice has increased considerably in the last two decades. In the absence of a similar public auditing practice, however, this impact on financial accounting and auditing can be noticed only at the theory level. Emphasis in these courses is principally on procedural aspects within the legal framework. As managerial and cost accounting are not restricted with rules and regulations, the impact of American accounting is much more discernible in the these fields. In any case, these divergent approaches in accounting education cause many communication problems for the accounting profession.

MBA programs offer functional courses providing a broad view of management problems in the first year and have accounting as a special field of concentration in the second year. Some large universities have begun offering special one-year accounting programs within the last several years. Because the introduction of public auditing is expected in the near future, these programs are designed as preparatory programs for training public accountants. Auditing courses focus heavily on accounting and auditing principles and standards applied in the United States.

Doctoral programs include several quantitative courses in addition to special accounting courses. Most of the dissertations are of a descriptive and analytic nature with extensive use of the protocol method. Due to the lack of a capital market with disclosure requirements, empirical research studies testing the market effects

[17] Computer programming is a required course, generally during the second year of the undergraduate programs.

of financial reporting could not be conducted for many years. Some promising research work has recently started, however, using financial statement computer data-based information provided by the chambers of commerce.

Universities, being well aware of the problems facing accounting education, began organizing annual conventions in 1979 to discuss the function of accounting education in the economic and social development of the country and to improve its quality. The Turkish Expert Accountants' Association also organizes seminars and publishes professional literature usually in close cooperation with accounting educators.[18] The real improvement in Turkish accounting education will, however, depend largely on the organization of the accounting profession and on the introduction of public auditing with related regulations.

## SURVEY ON ACCOUNTING PRACTICE

To complete this overview of the accounting environment in Turkey, a survey of the current accounting practice will be presented. The survey format developed by Choi and Bavishi provides a framework for comparative international surveys and includes twenty-four countries; this format has been extended to Turkey.

Fifty-one of five hundred top corporations registered with the Chamber of Commerce of Istanbul participated in this survey. The Choi/Bavishi questionnaire consisted of thirty-two questions; some were modified for clarification and some new questions were added to obtain more information on Turkish accounting practice. To provide greater comparability, the results obtained by the original survey for the United States and Spain are presented with Turkish results. In addition to the United States, Spain was selected from the twenty-four countries of the original survey as a country with an economic structure most similar to that of Turkey. The main results of the survey, with additional comments on specific topics, are summarized here.

### Asset Valuation

The weighted average method of inventory valuation is most widely used in Turkey, whereas FIFO appears to be the dominant practice in Spain, and no single method predominates in the United States. The lower of cost or market method (LCM) is permitted by tax regulations only if the sales price of the inventory is at least

[18] The Turkish Expert Accountants Association (TEAA) is the only private organization of accounting professionals and educators. Satisfactory completion of an examination is required for admission.

10 percent lower than its cost and 25 percent of the same inventory has actually been sold at lower prices. Manufacturing overhead is allocated to inventories in all three countries. The LCM method for marketable securities is not applied in Turkey, whereas provision for uncollectible accounts is the predominant practice. The opposite appears to be the case in Spain for both instances.

#### Depreciation and Amortization

While straight-line depreciation for financial reporting is the predominant practice in the United States, different depreciation methods allowed by tax regulations are also used in Turkey for financial reporting. The straight-line method is most common, but the double-declining method is also quite widely applied. The tax regulation allows extraordinary depreciation for special circumstances. Investment tax credits are also extensively used to encourage investments, especially in underdeveloped regions of the country. For qualifying projects, 20 to 50 percent of the investment amount can be deducted from taxable income depending on the kind, location, and size of the project. In a manner similar to U.S. practice, intangible assets, including goodwill, are amortized. Amortization of goodwill appears not to be a common practice in Spain.

#### Tax Allocation

The problem of deferred taxes due to timing differences, as found in U.S. practice, does not exist in Turkey. Differences between taxable income and pre-tax accounting income are solely permanent ones, mainly due to nondeductible expenses and nontaxable revenues. This seems to be the case in Spain as well. Another important divergence from U.S. practice is that the estimated amount of taxes on the income of the current period is not disclosed in annual financial statements. Tax accruals on the taxable income of the previous period are recorded at the time of filing the tax returns and declaration of dividends, which generally occurs at the end of the first quarter of the year.

#### Reserves and Provisions

As in U.S. practice, discretionary reserves are not allowed in Turkey, while the opposite appears to be the case in Spain. The terms "reserve," "provision," and "retained earnings" used in Turkish practice differ in their meaning from those in U.S. practice. Ordinary and extraordinary reserves are legal or statutory allocations from net income to special accounts within stockholders' equity. Provisions represent appropriation of earnings for special

purposes such as "renovation funds." A retained earnings account includes the residual amount after the above-mentioned allocations from the previous periods' earnings. The net income before taxes of the current period is disclosed as a separate item on the annual statements. Since tax and dividend accruals are recorded during the year, they do not appear with their initial amounts on the year-end financial statements. Provisions for contingent liabilities can be allocated only if they are permitted by tax legislation or required by special laws as in the case of insurance companies.

#### Long-Term Liabilities and Stockholders' Equity

Discounts or premiums on bonds and treasury stock transactions could not be found in Turkey, as opposed to the situation in the United States and Spain. This absence reflects the underdevelopment of the capital market in Turkey. Most of the changes in Turkish accounting practice may be expected in this field, however, due to the new possibilities and regulations introduced by the Capital Market Law.

#### Long-Term Financial Investments and Consolidation

The treatment of long-term investments and consolidation is aother area of divergence between Turkish and U.S. practices. Although ownership in other corporations and the establishment of conglomerate organizations have become rather widespread during the last decade, the equity method and full consolidation have not yet found wide application. The cost method is the dominant one in current practice. While the cost method is also predominant in Spain for investments up to 50 percent ownership, full consolidation appears to be most common for higher participations.

#### Foreign Currency Translation

Differences between Turkish and U.S. practices can also be seen in foreign currency translations. The temporal method is not used by Turkish corporations which have affiliations in foreign countries. This seems also to be the case in Spain. Only a few companies participating in the survey and having foreign affiliations responded that the current year's average exchange rate has been used for currency translation purposes.

#### Inflation Adjustment

Almost all companies participating in the survey confirmed having made use of the possibility granted by tax legislation to restate their fixed assets at the end of year 1982, as discussed earlier.

Supplementary disclosure for inflation adjustment as in the United States is not required in Turkey. The same seems to hold true for Spain as well.

### Setting Accounting Standards

Question 33 was added to the original survey to inquire of the preference of firms concerning setting accounting standards. Of fifty-one responses, thirty-six favored a professional organization to be in charge of this responsibility, whereas the remainder preferred governmental regulation. This interesting result may be due largely to the positive attitude toward a free market economy and the deregulation policy presently prevailing in the country.

## CONCLUSIONS

This overview of the accounting environment and recent developments in Turkey leads to the following conclusions:

1. The accounting environment is dominated by legal requirements. The Tax Procedure and Commerce Laws were the main factors affecting accounting practice until 1982. The recent Capital Market Law will definitely have a lasting impact on future developments.
2. The economic structure of the country has undergone drastic changes over the last decades. The shift from a rural to a more industrialized structure, from an economy oriented to the domestic market to one more open to foreign markets, from family-owned small companies to publicly held large corporations with more complex economic transactions, will require the accounting profession to face new challenges.
3. The structural change in the economy has largely been accompanied by high inflation, soaring interest rates and rapid increases in foreign exchange rates. The distortion of economic proportions has led to numerous off-record transactions, making a sound accounting practice almost impossible for many companies. Family businesses with abnormally high debt/equity ratios were forced to raise more equity capital. All this pressure has led to the introduction of the Capital Market Law and to the legislation concerning inflation adjustment.
4. With the establishment of the Capital Market Board (CMB), the Capital Market Law represents the start of a new era for Turkish accounting practice. The CMB has the authority to specify accounting principles and standards to be observed by the profession. The introduction of public auditing will ultimately be the next step. The accounting profession and education are now faced with

the challenge of contributing to the efforts of the CMB to regulate accounting practice. A blind adoption of American generally accepted accounting practices will obviously not fit the Turkish environment. The standards must be tailored to the special circumstances and needs of the country. Until development of the capital market reaches a certain level, the managerial use of accounting information will receive more attention than external use. Since the state economic enterprises hold a dominant share in several key sectors of the economy, efficiency in the use of a considerable amount of resources will depend on the management, accounting, and auditing systems applied in these institutions.

## BIBLIOGRAPHY


Aricanli, Tosun A. "The Role of the State in Social and Economic Transformation of the Ottoman Empire, 1807-1918." Ph.D. dissertation, Harvard University, 1977.

Arpan, Jeffrey S. and Lee H. Radebaugh. *International Accounting and Multinational Enterprises.* Boston: Warren, Gorham and Lamont, 1981.

Birch, Michael L. "The Evaluation of Accounting and Auditing Practices in Turkey from the International Accounting Standards Point of View." Paper presented at VI Turkish Accounting Education Symposium, Antalya, May 9-11, 1984.

Choi, Frederick D. S., ed. *Multinational Accounting — A Research Framework for the Eighties.* Ann Arbor, Mich.: UMI Research Press, 1981.

______ and Vinod B. Bavishi. "Financial Accounting Standards: A Multinational Synthesis and Policy Framework." *International Journal of Accounting* (Fall 1982), 159-83.

______ and Gerhard G. Mueller. *International Accounting.* Englewood Cliffs, N.J.: Prentice-Hall, 1984.

Cohn, Edwin J. *Turkish Economic, Social, and Political Change. The Development of a More Prosperous and Open Society.* New York: Praeger, 1970.

Enthoven, Adolf J. "Accountancy and Economic Development Policy." Paper presented at Thirteenth Turkish Congress of Accounting, Istanbul, October 8-10, 1980.

Erdilek, Asim. *Direct Foreign Investment in Turkish Manufacturing — An Analysis of the Conflicting Objectives and Frustrated Expectations of a Host Country.* Kiel Study 169. Tuebingen: J. C. B. Mohr (Paul Siebeck), 1982.

______. "The Dynamics of the Direct Foreign Investment Environment in Turkey." Paper presented at the annual meeting of the Academy of International Business, San Francisco, December 27-30, 1983.

Findley, Carter V. *Bureaucratic Reform in the Ottoman Empire.* Princeton, N. J.: Princeton University Press, 1980.

Goktan, Erkut. "The Present and Potential Role of Accounting in Economic Development of Turkey." Ph.D. dissertation, University of North Carolina, 1968.

Hale, W. M. *The Political and Economic Development of Modern Turkey.* London, 1981.

Hatipoglu, Z. *The Turkish Economic Growth and International Literature.* Istanbul, 1981.

Heper, Metin. "Recalcitrance of the Turkish Public Bureaucracy to Bourgeois Politics: A Multi-Factor Political Stratification Analysis." *Middle East Journal* (Autumn 1976), 485-500.

Herschlag, Z. Y. *Turkey: The Challenge of Growth.* Leiden: E. J. Brill, 1968.

Holzer, H. Peter, ed. *International Accounting.* New York: Harper & Row, 1984.

Karpat, K. H., ed. *Social Change and Politics in Turkey: A Structural-Historical Analysis.* Leiden, 1973.

Ogan, Pekin. "Turkish Accountancy: An Assessment of Its Effectiveness and Recommendations for Improvements." *International Journal of Accounting* (Fall 1978), 133-47.

Okyar, Osman. "Development Background of the Turkish Economy." *International Journal of Middle East Studies* (August 1979), 325-44.

Onis, Ziya. "Inflation, Structural Change and Stabilization Programme in a Semi-Industrial Economy: The Case of Turkey, 1970-1979." University of Manchester, 1983.

Ozbudun, Ergun, and Aydin Ulusan, eds. *The Political Economy of Income Distribution in Turkey.* New York: Holmes and Meier, 1980.

Seidler, Lee J. *The Function of Accounting in Economic Development: Turkey as a Case Study.* New York: Praeger, 1967.

______. "Beware of Accounting Imported from Developed Countries." Paper presented at the Thirteenth Turkish Congress of Accounting, Istanbul, October 8-10, 1980.

Singer, Morris. *Economic Development in the Context of Short-term Public Policies: The Economic Advance of Turkey, 1938-1960.*" Turkish Economic Society Publication (1977).

Tumer, Erol. "An Investigation of the Present and Potential Role of Financial Accounting in the Capital Market in Turkey." Ph.D. dissertation, University of Illinois at Urbana-Champaign, 1972.

Turan, Ilter. "Turkey: The Reshaping of Domestic and External Politics." *Middle East Annual,* vol. 2 (1983), 151-76.

______. "Stages of Political Development in the Turkish Republic." Paper presented at the Third International Congress on the Economic and Social History of Turkey, Princeton University, August 24-26, 1983.

Var, Turgut. "The Current Accounting Education and Practice in Turkey." *The International Accountant,* no. 4 (1976), 8-12.

______. "Internal Control for Ottoman Foundations." *Accounting Historians Journal,* vol. 9, no. 1 (1981), 1-13.

Walstedt, Bertil. *State Manufacturing Enterprise in a Mixed Economy — The Turkish Case.* Baltimore: Johns Hopkins University Press, 1980.

Watt, George C., Richard H. Hammer, and Marianne Burge. *Accounting for the Multinational Corporation.* New York: Research Foundation of the Financial Executives Institute, 1977.

**APPENDIX. SURVEY RESULTS**

| Original survey # | Turkish survey # | Questions | Turkey | U.S.A. | Spain |
|---|---|---|---|---|---|
| | | | Countries | | |
| 1. | 1. | Marketable securities recorded at the lower of cost or market? | No** | Yes | Yes |
| 2. | 2. | Provision for uncollectible accounts made? | Yes | Yes | No** |
| 3. | | Inventory costed using FIFO? | Mixed | Mixed | Yes |
| | 3. | Inventory valuation method in use? a. FIFO b. LIFO c. W.Aver.(WA) d. Other | Majority: WA 2.Rank: FIFO 3.Rank: LIFO | | |
| 4. | 4. | Manufacturing overhead allocated to year-end inventory? | Yes | Yes | Yes |
| 5. | 5. | Inventory valued at the lower of cost or market? | No** | Yes | Yes |
| | 6. | Investment (participation) in another corporation? If No go to 12 | Majority: Yes | | |
| 6. | 7. | Accounting for long-term investments: Less than 20% ownership: cost method? | Yes | Yes | Yes |
| 7. | 8. | Accounting for long-term investments: 21-50% ownership: equity method? | No | Yes | Cost |
| 8. | 9. | Accounting for long-term investments: more than 50% ownership: full consolidation? | No** | Yes | Yes |
| 9. | | Both domestic and foreign subsidiaries consolidated? | No** | Yes | Yes |
| | 10. | Consolidated statements (balance sheet and income statement) including affiliated corporations prepared? | No** | | |
| | 11. | Participations in foreign corporations included in consolidated statements? | No** | | |
| 10. | 12. | Acquisitions accounted for under the pooling of interest method? | Yes* | Yes | NF |
| 11. | 13. | Intangible assets: Goodwill amortized? | Yes | Yes | No |

**APPENDIX (cont.)**

| Original survey # | Turkish survey # | Questions | Turkey | Countries U.S.A. | Spain |
|---|---|---|---|---|---|
| 12. | 14. | Any other intangible assets than goodwill (example: patent, copyright, trademark, organization cost) included in the balance sheet? | Yes | Yes | Yes |
| 13. | 15. | Long-term debt includes maturities longer than one year? | Yes* | Yes | Yes |
| 14. | 16. | Is discount or premium on long-term debt included in your balance sheet and amortized? | No** | Yes | Yes |
| 15. | | Deferred taxes recorded when accounting income is not equal to taxable income? | N/A | Yes | No |
| | 17. | Estimated amount of the tax for the current period included in your balance sheet? | No** | | |
| 16. | 18. | Financial leases (long-term) capitalized? | No | Yes | No |
| 17. | 19. | Company pension fund contribution contributed regularly? | No | Yes | Yes |
| 18. | 20. | Total pension fund assets and liabilities excluded from company's financial statements? | NF | Yes | Yes |
| 19. | 21. | Research and development expensed? | Yes | Yes | Yes |
| 20. | 22. | Treasury stock deducted from owners' equity? | No | Yes | Yes |
| 21. | | Gains and losses on treasury stock taken to owners' equity? | No | Yes | Yes |
| 22. | | No general purpose (purely discretionary) reserves allowed? | N/A | Yes | No |
| 23. | 23. | Dismissal (seniority) indemnities accounted for on a pay-as-you-go basis? | Yes | Yes | Yes |
| | | If No for question 10, go to 27. | | | |
| 24. | 24. | Minority interest excluded from consolidated income? | No** | Yes | NF |
| 25. | 25. | Minority interest excluded from consolidated owners' equity? | No** | Yes | NF |
| 26. | 26. | Are intercompany sales/profits eliminated upon consolidation? | Yes* | Yes | Yes |

**APPENDIX (cont.)**

| Original survey # | Turkish survey # | Questions | Turkey | U.S.A. | Spain |
|---|---|---|---|---|---|
| | | | Countries | | |
| 27. | | Basic financial statements reflect a historical cost valuation (no price level adjustment) | | Yes | No |
| | 27. | Did you make a valuation adjustment for 1982 according to the tax regulation? | Yes | | |
| 28. | | Supplementary inflation-adjusted financial statements provided? | Mixed | Yes | No |
| | 28. | Do you provide in your annual reports, besides the adjustments allowed by tax law, more comprehensive additional inflation-adjusted financial statements? | Mixed | | |
| 29. | | Straight-line depreciation adhered to? | No | Yes | Mixed |
| | 29. | Depreciation method used?<br>a. Straight-line (SL)<br>b. Accellerated (AC) | Majority: SL | | |
| 30. | | No excess depreciation permitted? | No | Yes | No |
| | 30. | Same depreciation method used for fixed assets? | Yes* | | |
| 31. | | Temporal method of foreign currency translation employed? | NF | Yes | No |
| | 31. | In case you have affiliated companies or offices operating abroad, exchange rate applied for the calculation of the cost of goods sold or services rendered?<br>a. Rate at last year-end (LYE)<br>b. Rate at current year-end (CYE)<br>c. Current year average (CYA) | Majority: CYA | | |
| 32. | 32. | Currency translation gains or losses reflected in current income? | No** | Yes | No |
| | 33. | Which regulatory body should set the accounting standards?<br>a. Government<br>b. Profession<br>c. Other | Majority: Profession | | |

**APPENDIX (cont.)**

| Original survey # | Turkish survey # | Questions | Turkey | Countries U.S.A. | Spain |
|---|---|---|---|---|---|
| | 34. | Do you have an auditing contract with an auditing firm? | No** | | |
| | 35. | Do you consider it useful all companies applying a uniform chart of accounts in Turkey? | Yes | | |

**Key:** Yes: predominant practice or opinion; Yes*: minor modifications, but still dominant practice; No: not adhered to; No**: minority practice; Mixed: alternative practices followed with no majority; NF: not found; N/A: not applicable.

# *The Egyptian Accounting System: A Case Study in Western Influence*

RICHARD J. BRISTON and AHMED A. EL-ASHKER*

This article is designed to illustrate the difficulties which can confront a developing country in establishing an accounting system appropriate to its needs and resistant to inappropriate existing pressure from the international accounting establishment (headed by the Big Eight accounting firms) to conform to U.S. accounting practice. The article traces the evolution of accounting in Egypt and describes in detail the philosophy and structure of the uniform accounting system which was established in the late 1960s. It concludes with a discussion of the way pressure from private-sector accounting firms currently threatens the existing system with the possible result that it may eventually be replaced by the U.S. system. The author perceives the U.S. accounting system to over-emphasize private-sector financial accounting and external auditing.[1]

## EGYPTIAN ACCOUNTING DEVELOPMENTS BEFORE 1956

The first major national development in Egyptian accounting was the Decree of Commerce enacted in 1883. This obliged merchants to keep the following accounting records: (1) a journal to record their daily transactions; (2) a book of goods to record the goods under the company's control at the end of every financial period; and (3) a record of correspondence to keep copies of the company's

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[1] See R. J. Briston, "The Evolution of Accounting in Developing Countries," *International Journal of Accounting* (Fall 1978).

correspondence to and from debtors and creditors. Little change was made to the legislation from 1883 until 1939 when the Income Taxation Act was surprisingly passed. The act did not have any direct effect on the accounting system, since its impact was indirect in the sense that it obliged taxpayers to submit a tax return. This return was to be ratified by a chartered accountant and supported by copies of the final accounts and the balance sheet, which the act stipulated should be extracted from "properly kept books." Although the aim of that rule was to encourage the taxpayer to keep books properly, the method by which this was to be done was not specified; it was instead left to accepted accounting conventions and the accountant's opinion as to whether a firm kept books properly or otherwise.

In establishing accounting conventions, the Egyptian accounting profession played a significant role in two main respects: first, through accounting education which was developed by the government at both the high school and university level,[2] and second, by maintaining regular channels of communication with professional and educational accounting bodies in the West. The national accounting profession was not officially organized until 1958, however, when the Egyptian Association of Chartered Accountants and Auditors was chartered. Its charter required specific qualifications (academic certificate and experience) as preconditions for practicing accounting as a profession. Prior to the issue of the charter, anyone who believed he had a knowledge of bookkeeping could claim proficiency and could have the right to practice as an accountant. This resulted in a low and deteriorating standard of accounting. Therfore, the association was an influence in restricting the practice of accounting to qualified persons and, consequently, in improving standards.[3]

A special act to regulate the administrative system in corporations and limited companies was enacted in 1954. It introduced a company disclosure system. The act gave companies the discretion to choose a bookkeeping system, providing that it satisfied the act's requirements. It also stipulated that the company's disclosure system should be ratified by an auditor who should also give his

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[2] For a survey of the education of accountants in Egypt, see Matwalli B. Amer and M. M. Khairy, "Accounting Education in Egypt" in *Accounting Education in Economic Development Managmeent*, ed. Adolf J. H. Enthoven (Amsterdam: North-Holland, 1981).

[3] The structure of the Egyptian accounting profession is described more fully in Matwalli B. Amer, "Impact of Public Ownership on the U. A. R. Accounting Profession," *International Journal of Accounting* (Spring 1969), 49-61.

opinion in his report on the system of bookkeeping in the company and on whether its accounts were correct.

At that time, the prevailing Egyptian accounting system was based primarily on the British system, with enterprises above a certain size being required to appoint a qualified accountant to act as auditor. At the same time, the financial transactions of governmental institutions were audited by the State Audit Department, which was broadly comparable with the Exchequer and Audit Department in the United Kingdom, particularly in its emphasis (at that time) on financial regularity rather than efficiency.[4]

The defects of the system before 1956 were the following:

1. As a result of the concentration of the legislation on the type of books and records that were to be kept, rather than on principles, definitions, and accounting terminology, accounting rules and regulations varied considerably depending on the personal judgments of the accountant in the enterprise. This resulted in such a variety of accounting procedures and principles that the final accounts and the balance sheet tended to be unreliable.
2. Although accountants tried to establish accounting conventions based on generally accepted accounting principles, the application of these principles was conditioned by the attitude of top management and by the extent it wished to conceal rather than to portray the actual financial position.
3. Following from these two points, the accounting information that was supplied to governmental bodies (taxation, administration, statistical, and planning) was unreliable and did not reflect the actual financial position of enterprises.

### THE PERIOD AFTER 1956

After 1956, Egypt, faced with the problem of limited economic resources and continuous increase in population, realized that economic resources should be placed under the full control of the state to spur economic development. A series of nationalization decrees was issued in 1956, 1961, and 1963 to eliminate the dominant role of both foreign and large-scale, local private capital. These nationalized enterprises were organized and categorized into groups according to activity. Each group was placed under the supervision of an "organization." The groups were classified into sectors on the basis of supervision by a pertinent minister. The nationalized enterprises were the main enterprises in the

[4] See Amer and Khairy, "Accounting Education in Egypt."

Egyptian economy and represented approximately 30 percent of total industrial activities. Housing ownership, small retail outlets, and a minor portion of industry were left under private ownership.

The management of public-sector enterprises in Egypt is similar to that for private-sector companies. Each enterprise has a board of directors with the authority and responsibility to manage the enterprise to achieve the most benefit of its available resources. Management, represented by the board of directors, has significant discretion in determining the company's policies in production, marketing (local and foreign), pricing, and finance. Apart from capital investment decisions, government intervention is not significant. In the field of production, the government intervenes to guarantee the supply of necessities and to coordinate the various sectors of the economy to organize the processes of commodity supplies.

The pricing of original goods is also under government control to guarantee the low-income class its essential goods at reasonable prices. Apart from essential goods, management has the discretion to fix prices based on cost data and what it considers the market can bear. A firm can utilize both types of pricing if it produces both types of goods (the government could specify some articles in clothing and textile companies, for instance, essential, while the other articles are not).

Investment decisions are not under management control. A feasibility study must be prepared to support management suggestions for expansion and/or replacement projects. The study, which is conducted in some detail (showing the initial cost required, the impact of the investment on other economic sectors, national income, employment, foreign currency, and so on), is discussed at the organization level by a specific committee which considers the significance of the suggested investments, their impact on the economy, and the availability of economic resources. It has the power to ratify the proposals wholly or in part. Management has total discretion over small investments, such as for furniture and fixtures.

## Planning

The first level in the process of national planning is the cabinet, which recommends general objectives for the country as a whole. The objectives are not intended as specific goals; rather, they represent some of the targets and general policies which the government chooses to adopt, such as increasing national income, improving the standard of living, achieving more economic self-sufficiency, adopting new economic policies, promoting light in-

dustry rather than heavy (or vice versa), encouraging private capital, and reducing (or increasing) subsidies to industry. The Ministry of Planning is responsible for the next stage. The ministry, considering the cabinet's recommendations, prepares a general plan for the entire country. This plan specifies the goals to be achieved by each economic sector and the interrelationship among these sectors. The ministry responsible for each sector examines its role in the general plan and may modify it under certain conditions subject to the agreement of the Ministry of Planning. Plans having been fixed at ministry level are then allocated to the various organizations within the ministry, considering the ability of each organization to achieve the required goals. The next step is to discuss the plan at the level of the individual companies in each organization, considering the company's goals and needs and also the interrelationships among companies under both the same and the other "organizations." Having discussed the plan at this final level, each company prepares its budgets on the basis of standard schedules (designed by the Ministry of Finance) and sends them before a specified date to the supervising organizations and ministries, the bank with which the company deals (cash budget), the Ministry of Planning, and the Ministry of Finance. Aggregated budgets at the national level are later discussed by the People's Assembly (Parliament). When the budgets receive the latter's approval, they become law.

#### System of Returns

A system of returns has been designed to provide the Ministry of Planning, the Ministry of Finance, the supervising ministry, and banks with a flow of information to assist in the process of planning and control. Companies are expected to submit regular returns in which various aspects of the activities of the company should be disclosed to these governmental bodies. Accounting, not surprisingly, is significant in this system. Most, if not all, of the financial information in the returns is taken from accounting records which must be current and audited. Management also depends on the information included in the returns, as well as other sources, in the process of decision making. Management is not, however, the only major user of information. Another user is the state, which directs the national economy of the country. Consequently, it is necessary that the state be supplied with the required information at the appropriate time and with a high standard of accuracy. In view of the state's dependence on accounting information as a main source of information, the government realized that an

accounting system had to be designed to achieve the following objectives:

1. To provide the basic accounting information for planning, implementation, and control at all levels of the economy on both an internal and an external basis; internally, to provide management at the company levels with reliable information on the progress of their operations; and externally, to provide the Ministry of Planning, the Ministry of Finance, the supervising ministry, and the Banking Administration with required information for the purpose of planning and control at the national level.
2. To link financial accounting at the enterprise level to social accounting at the national level. Such linkage would enable the state to calculate accurately the national income, especially if the terminology, accounting concepts, and standards used at the enterprise level were unified, a matter which would guarantee homogeneous and compatible data for national purposes. To achieve that goal, the enterprise accounts would be designed in such a way as to meet the needs of social accountants, as well as enterprise accountants.
3. To facilitate the process of collecting, tabulating, and storing data by an enterprise so that it may easily provide governmental bodies with the required information. Tabulating data in a unified manner would (1) facilitate the efforts of the nation to collect the desired information, (2) ensure an improvement in the accuracy of information, (3) shorten the time needed to collect data on all economic activities in the country, and (4) enable management to judge its performance through comparisons with similar enterprises.

A study of the status of accounting in Egypt before 1956 indicates a clear need for accounting reform to fulfill these objectives. Before 1956, accounting concepts, terminology, rules, and regulations varied considerably, depending upon an enterprise's point of view, a situation which resulted in different accounting procedures and principles so great that the financial reports of enterprises were unreliable and not comparable. Furthermore, despite the fact that accountants attempted to establish accepted conventions regarding accounting principles and terminology, the application of these principles depended on top management's point of view and its desire to disclose the real financial situation or otherwise. Consequently, the accounting information which was supplied to tax authorities, statistical departments, and planning and control bodies in the country was unreliable.

In view of the urgent need to encourage economic development in the country, a revolution in Egyptian accounting, rather than an evolution, was then required. Such a revolution was needed to help the country to remedy more quickly the accounting defects just described to provide the country with the reliable information it urgently required.

A new accounting system was introduced by the Egyptian Central Accounting administration (CAA) in 1966. This system has the following main features:

1. It is compulsory for all enterprises in the public sector, with the exception of banks and insurance companies which have different regulations. The applicability of the system to the private sector is delegated to the relevant minister who decides whether the system is to be applied or not, determined by the extent of its importance in national planning and control. The system was approved in December 1966 and has been applied from the financial year January 7, 1967 to June 30, 1968.
2. The system is uniform. The main impetus for accounting uniformity in Egypt came not from a concern with the disclosure system but from the need for uniformity for planning and control purposes, so that particular attention is paid to the standardization of the measurement and definition of costs. The reason behind this was the government's dependence on the accounting system as an information tool to plan and control economic activities. Further, the uniformity of the system also reflects the uniformity of the financial period, the chart of accounts, and the disclosure system.
3. The system is flexible. This flexibility is reflected in the establishment of a permanent committtee to provide a continuing review and appraisal of the system and to suggest revision if the need arises. Further, the code number in the accounts plan is regarded as a minimum level of coding; enterprises may add additional items, depending on their needs, provided that they consult the relevant minister and acquire the approval of the CAA. Finally, enterprises have the discretion to use any additional records which management believes to be necessary to provide internal and external bodies with statistical information.

The system's flexibility is of great importance, for such flexibility enables it to respond to changing circumstances and to develop new systems and new ideas. Consequently, there is less danger that

such a standardized system might lead to a superficial appearance of uniformity and result in inflexible and unresponsive accounting procedures.

### The Salient Features of the Egyptian Uniform Accounting System

Accounts are classified in homogeneous classes in a manner which assists in preparing national accounts, as well as satisfying the needs of the traditional financial accountant. Exhibit 1 demonstrates this classification, on the basis of which accounts are categorized into two main categories: balance sheet accounts and operating accounts. For accounts codification, a decimal system in which the accounts are classified into classes is used as follows: Class 1: assets; Class 2: liabilities; Class 3: uses of resources (which constitute the various items of costs); and Class 4: resources (the revenue items).

Classes 5, 6, 7, 8, and 9 represent control accounts, which are closed at the end of the accounting period and are kept for the purpose of analyzing uses of resources in cost centers. Each class number represents a control account of one of the five cost centers, namely the production center, the production service center, the marketing service center, the administrative and finance center, and the capital transaction center.

The purpose of analyzing costs in these cost centers is to prepare the production and trading account and the profit and loss accounts and, simultaneously, to prepare the current operations account (the main final account) at the end of the financial period. The former accounts meet the needs of the financial accountant and provide functional cost data, while the latter provides the social accountant (at the state level) with the data required for national purposes.

Further, the cost of self-constructed assets is analyzed and shown separately in the capital transactions center control accounts. Cost in this center consists of wages, material usage, services acquired, and various transferred expenses which have been used for manufacturing fixed assets in the firm. These items of cost should be added to the cost of fixed assets, according to the type of assets, and deducted from their corresponding accounts to exclude from the final results any item which does not belong to the normal operations of the firm.

These accounts and their subclasses have been clearly specified in such a way as to avoid imprecision in their accounting treatment. The items of cost included in each of the analytical accounts have been clearly defined to avoid any confusion in the allocation of costs to the appropriate accounts.

**Exhibit 1. Egyptian Uniform Chart of Accounts**

| Balance sheet accounts | | Operating and revenue accounts | | Analysis of uses of resources | | | | |
|---|---|---|---|---|---|---|---|---|
| 1 Assets | 2 Liabilities | 3 Use of resources | 4 Resources | 5 Production centers control | 6 Production service centers control | 7 Marketing service centers control | 8 Admin & finance service centers control | 9 Capital transaction centers control |
| 11 Fixed assets | 21 Capital | 31 Wages | 41 Revenues from current operations | 531 Wages | 631 Wages | 731 Wages | 831 Wages | 931 Wages |
| 12 Incompleted projects | 22 Reserves & forwarded surplus | 32 Commodity requirements | 42 Subsidies | 532 Commodity requirement | 632 Commodity requirement | 732 Commodity requirement | 832 Commodity requirement | 932 Commodity requirement |
| 13 Inventory | 23 Allowances | 33 Service acquired | 43 Revenues from securities | 533 Service acquired | 633 Service acquired | 733 Service acquired | 833 Service acquired | 933 Service acquired |
| 14 Long-term lending | 24 Long-term loan | 34 Finished goods purchased for sale | 44 Transferred revenues | 534 Finished goods purchased for sale | — | — | — | — |
| 15 Financial investment | 25 Credit banks | 35 Current transferred expenses | 45 — | 535 Current transfer expenses | 635 Current transfer expenses | 735 Current transfer expenses | 835 Current transfer expenses | 935 Current transfer expenses |
| 16 Debtors | 26 Creditors | 36 Current transfer | — | — | — | — | — | — |
| 17 Misc. debtor accounts | 27 Misc. creditor accounts | — | — | — | — | — | — | — |
| 18 Cash in hand and at bank | 28 Results of the year | — | — | — | — | — | — | — |

Moreover, in classifying the accounts, the information needs at the macro level of governmental bodies and social accountants have been considered. Capital investment is an example. At the macro level, such investment is classified into capital investment added and capital investment transferred. While the former constitutes the actual increase in the capital resources in the country, the latter represents movements in capital goods between enterprises at the micro level which do not affect the actual existence of those goods at the macro level. The purchase price of land and of second-hand assets is consequenty considered as capital transferred, while other expenses which are incurred in adapting the land and in acquiring new fixed assets are regarded as capital added. To satisfy the financial accountant's needs at the micro level, all capital expenditure that is incurred in an enterprise is considered as capital investment, while to meet the social accountant's requirements at the macro level, those investments are recorded in such a way as to separate capital added from capital transferred when disclosing this information to governmental bodies. Furthermore, customs duties and all taxes that might be included in capital investment are recorded in independent accounts and revealed separately in firms' returns so that the effect of taxes in capital investments can be calculated.

One more example from the operating and revenue side can be cited. The system requires that an independent account be kept for current transferred expenses, which should be disclosed separately in the final accounts of the firm (current operating account). The account, as a group account, includes the following subgroup accounts: custom duties, production dues, excise, other taxes (such as stamp tax, rates, and vehicle road tax), depreciation, rent, and imputed costs. The reason for reporting these items independently in the final accounts is to satisfy the macro-level needs of governmental bodies which are interested in examining the impact of tax legislation on the cost of goods.

For the same reason, imputed costs, such as imputed rent and interest, are also shown. This provides these bodies with the necessary data to prepare national income accounts without the introduction of bias due to the financial structure of the firm or because it owns its building.

The distinction between current transferred expenses and current transfers might usefully be explained. Current transfers include gifts, contributions to others, fines, capital losses (resulting from selling fixed assets or securities at less than their book value),

prior years' expenses, rates, and income tax. The difference between current transferred expenses and current transfers is that while the current transferred expenses are regarded as part of the costs of industrial operations, the current transfers are regarded as appropriated transfers.

#### Linking Microaccounting to Macroaccounting

In addition to the needs of the social accountant included in design of the structure of subaccounts, the system includes "opposite twin accounts" designed to link microaccounting to macroaccounting. These accounts appear, at the same value, on both sides of the current operation account. These opposite, twin accounts are illustrated in Exhibit 2.

The existence of opposite twin accounts does not mean that the accounts have no effect so that they can be completely ignored. In fact, they have a significant role in linking the requirements of social accountants with those of the financial accountant. Accounts 413 and 4183 in the current operation account help to calculate the value of production at selling price according to the requirements of the social accountant. Accounts 358 and 359 offset the effect of the preceding accounts and provide the financial accountant with necessary financial data to evaluate inventory at cost or market price, whichever is lower. The surplus is affected by imputed interest when the figure for "surplus of normal operations" is determined, but that effect is offset by the opposite accounts on the resources side when the ultimate amount of distributable surplus is calculated, and the surplus is shown excluding the effect of imputed costs.

**Exhibit 2. Current Operation Account**

| Uniform account number | Resources | Uniform account number | Uses of resources |
|---|---|---|---|
| 447 | Variance of imputed rent | 354 | Variance of imputed rent |
| 448 | Variance of imputed interest | 357 | Variance of imputed interest |
| 413 | Valuation of difference of finished inventory | 358 | Valuation difference of finished inventory |
| 4183 | Valuation difference of finished goods purchased for sale | 359 | Valuation difference of finished goods purchased for sale |

### Disclosure System

Under the Egyptian uniform accounting system, firms must prepare the following financial statements and final accounts: (1) balance sheet; (2) statement of changes in financial position; (3) current operation account; (4) production and trading account; (5) profit and loss account; and (6) cash flow statement.

**Balance sheet.** Enterprises must prepare a balance sheet in the normal two-sided form, with assets and liabilities arranged to reflect a decreasing degree of liquidity. Intangible assets, such as good will, are not included in the system, and the deferred revenue expenditure account includes start-up expenses, the cost of experimental operations (which incorporates costs that occur prior to the regular operation), research, drawing and design, and interest incurred before the regular operations and long-term advertising.

On the other hand, when recorded in the company's books, fixed assets and their related depreciation should be allocated to cost centers. One reason for such allocation is to facilitate the preparation of the production and trading, and profit and loss accounts.

**Statement of changes in financial position.** This statement indicates the sources and uses of capital. It reports the items of capital added separately from the items of capital transferred. Moreover, customs duties on fixed assets and on inventory are shown separately in the statement to indicate the effect of taxation legislation on capital invested.

**Current operation account.** This account is divided into three main sections. The first section reports the surplus or profit from normal operations; the second reports income available for distribution; the third indicates how distributable income is to be allocated (an appropriation account). The difference between the surplus from normal operations and the income available for distribution lies in the current transfers account on the expense side and the transferred revenues account on the revenues side. The former is to be deducted from the surplus from normal operations, and the latter is to be added, to compute distributable surplus.

Furthermore, the current operation account is a quick and efficient tool for calculating value added in such a way to satisfy the needs of the social accountant without sacrificing the needs of the financial accountant. This is demonstrated in Appendix D, which indicates that all of the items required to calculate value added have been directly extracted from the account. The value-

added statement is one of the main statements which should be prepared by the firm and included in the performance appraisal report.

**Production and trading account, and profit and loss account.** The preparation of these two accounts is required to provide cost data of the firm's manufacturing, selling, and administrative processes. It provides a functional classification of cost which assists in controlling the firm's functional activities. This is illustrated by exhibit 3. On the other hand, the profit and loss account (exhibit 4) reflects the cost of administration and its efficiency, represented in the difference between gross surplus of production and trading and the net distributable surplus.

The preparation of these accounts causes the enterprise accountant little trouble at the end of the financial period since most of the work has been completed during the year. While recording transactions in the appropriate accounts during the year, the

**Exhibit 3. An Outline of the Production and Trading Account**

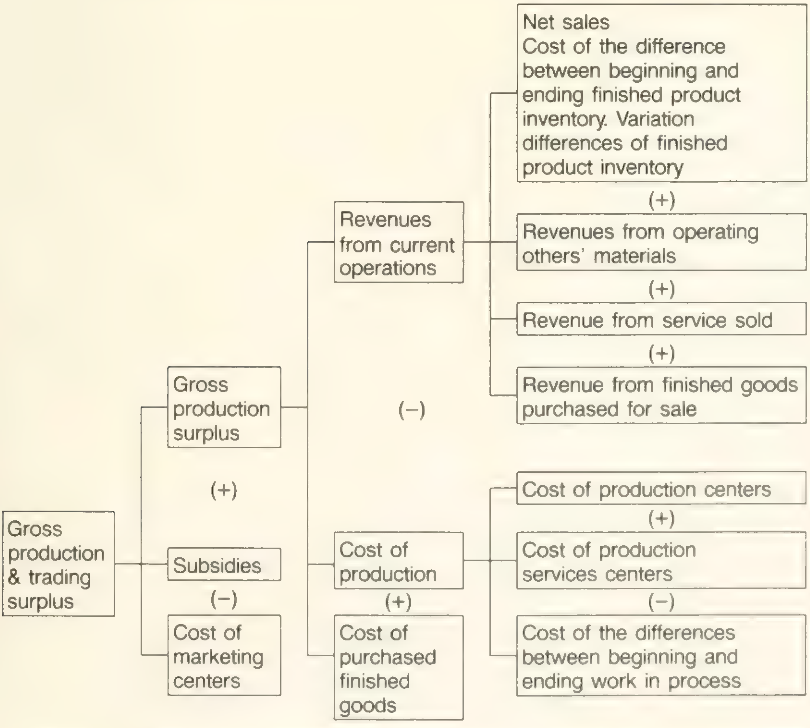
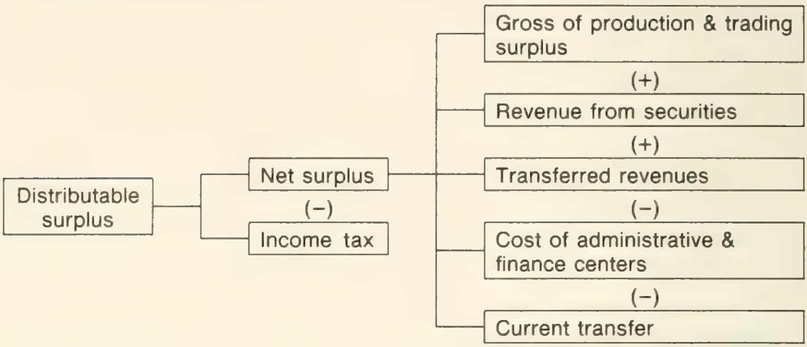


**Exhibit 4: An Outline of the Profit and Loss Account**




bookkeeper also records them and charges them to cost centers. For this purpose, the debit side of the cost account is divided horizontally into columns to include the various cost centers, as well as a column for the total amount. In the same way, while the total amount is posted to the current operations account according to the double-entry system, the totals of cost center columns are used to prepare the production and trading account, and profit and loss account. Recording the analyzed costs in such a system occurs in a rather statistical fashion and is outside the double-entry system. On the other hand, the analysis of costs according to cost centers is the main task of the cost accountant who is responsible for providing the bookkeeper with analyzed data based on the primary recording documents.

In conclusion, while the current operations account is considered the only final account to which cost and revenue items are posted, the production and trading account, and the profit and loss account are regarded as complementary accounts which are prepared outside the double-entry system.

### Cash-Flow Statement

This statement reports cash flow in the enterprise analyzed into (1) the nature of expenses and revenues regarding which cash has been paid or received, and (2) the type of enterprise with which there have been transactions which have resulted in cash inflows or outflows. Expenditures and revenues, current and capital, are classified in the statement according to their classification in the balance sheet and current operations accounts with some extra detail or amalgamation where appropriate. Enterprises that deal

with the firm are classified into domestic market enterprises and foreign market enterprises. Domestic market enterprises are subclassified into (1) business-public sector, (2) service-public sector, (3) private sector, (4) government sector, and (5) householders. Foreign market enterprises are subclassified into (1) enterprises that result in hard currency transactions, either into or out of the country, and (2) enterprises that do not affect hard currency.

To facilitate the preparation of the statement in this manner, subsidiaries' books (purchase books, sales books, cash book) must be kept in a manner which identifies the type of enterprise in the statement at the end of the period.

### The Egyptian Accounting System and the Evaluation of Financial Performance

An individual or an organization interested in examining the financial health of a firm will find it necessary to analyze the firm's financial statements. The quantity of information that is disclosed in financial statements and the extent of its reliability and its segmentation, however, determine to a great extent the feasibility and the dependability of such analysis. For example, some information, such as cost of sales and the capital investments which have not yet contributed to the firm's profit, might not be available to the outside analyst, which would limit the value of financial analysis or lead to misleading results. The Egyptian accounting system has succeeded in eliminating this problem to a great extent, for financial statements have been designed to help interpret the firm's results and judge its performance, even for the external analyst. The disclosure of incomplete projects as a separate item in the balance sheet and the methods of classifying the inventory in the balance sheet and of portraying costing data in the production and trading, and profit and loss accounts are examples.

Incomplete projects (account 12 and its subgrouped accounts) constitute those projects which have not yet been completed and consequently have not yet contributed to the firm's profit. The account incorporates the amounts which have been paid in advance in the purchase of fixed assets which have not yet reached the firm and the fixed assets that have arrived at the firm but have not yet been used in production. Showing incomplete projects separately in the balance sheet serves these functions:

1. Assists the interpreter of financial statements to exclude them when relating the capital invested to profits in order to measure correctly the efficiency with which the firm's assets have been used;
2. Assists the outsider who does not have access to internal

information to prepare a more accurate estimate of a firm's profit in the following year(s); and

3. Permits a better comparison between companies in the same sector by avoiding distortion in the final results that might be caused by not showing these projects.

Although inventory is classified in the balance sheet in the normal (Anglo-Saxon) way, the Egyptian system requires more detailed information, such as inventories of scrap, goods at other enterprises, finished goods purchased for sale, and letters of credit for the purchase of goods. Disclosing these items separately in the balance sheet is useful for the interpretation of the firm's results and the appraisal of its performance. For example, the disclosure of scrap inventory in the balance sheet provides a crude measure of wastage in the firm for those who do not have access to inside information. On the other hand, inflated balances of "goods at other enterprises" in the balance sheet might raise questions as to the reason for keeping these goods at other premises. For example, the reason could be that the firm depends on other enterprises (public or private) to perform a part of the production process or that it does not have sufficient stores. Or it may be some other reason which may require further investigation, which would assist the government in the process of control. Since the government is keen to ensure that management is effectively using the economic resources available to the firm, it would be important to ensure that the firm's dependence on others for the provision of certain manufacturing or storing facilities is due entirely to the need for those facilities and is not intended merely to keep the suppliers of those facilities in business. Although the mere disclosure of these items in the balance sheet does not provide an answer to such questions, it does direct the attention of the analyst to an area that may need further exploration. Moreover, the production and trading, and profit and loss accounts provide the reader with information as to costs, which is of great importance in the analysis of the company's results and in relating some of the balance sheet items to the correspondent operating account items to calculate inventory turnover and credit period. Further, companies, to facilitate historical and sectoral comparisons, are required to provide comparative figures for the previous year. They are also required to report budgeted data in the returns which they send to governmental bodies to facilitate a comparison between the financial information for the present year with that of the previous year and that budgeted for the next year.

**The Egyptian Accounting System as a Source of Financial Information**

One of the main objectives which the Egyptian accounting system has been seeking and has succeeded in achieving is the collection, tabulation, and storage of data by companies to provide governmental bodies with the required information. Business practice indicates that various kinds of information at different degrees of detail can be easily collected at the national level within a comparatively short time. Concerning wages, for example, much information can be collected, depending on the factors which governmental bodies wish to examine, such as the contractual relationship between workers and overtime payments, age groups, wages in kind, and contributions to national insurance. Permanent, temporary, and seasonal wages, remuneration to outside experts (home and overseas experts separately), overtime for extra hours worked, official holidays, and incentive wages are additional examples of information which could be collected and reported to the state at any level in a short time if the need arose.

When it is realized that similarly detailed information can be readily obtained for all items of financial information both in the operating and the balance sheet accounts, and that this information is available in a uniform fashion, it is clear that the Egyptian accounting system provides many advantages for the purposes of economic planning and control. In practice, the Egyptian system has proved successful in providing governmental bodies at the state level, as well as management at the enterprise level, with reliable financial information at the right time. As explained here, the reasons for this success are these:

1. The accounts have been carefully preclassified. The classification reflects the types of information required by governmental bodies and simultaneously meets management's needs for financial information;
2. The committee responsible for establishing the system incorporated a combination of many specializations: macroaccountants, microaccountants, enterprise managers, government representatives, bankers, and academics. The inclusion of these categories of professions, especially macroaccountants and microaccountants, ensured the interests of the various groups in the system would be fully considered;
3. The application of unified accounting concepts ensures that information is provided in a homogeneous form;
4. The provision of a training program for accountants and

bookkeepers at the enterprise level will enable them to understand and absorb the system;

5. The stability and the flexibility of the system is reflected in the uniform accounting classification which provides a limit or boundary to firms within which they have relatively little discretion, for the enterprise's right to add additional accounts to the classification is restricted. If the need for such an addition arises, an enterprise must consult the relevant minister and obtain the approval of the Central Accounting Administration. The flexibility is obtained by establishing a committee whose responsibility is to supervise the execution of the system, to add more accounts to the classification if needed, and to review the system to incorporate any new ideas that might appear appropriate; and

6. Accounts are regularly audited. The continuous auditing approach is adopted in Egypt, which minimizes the time that might elapse between the occurrence of a mistake and its detection. The structure of the auditing system is particularly important and is described in detail in the next section.[5]

### The Organization of Auditing in Egypt

In Egypt, public-sector auditing is performed by the Central Auditing Organization (CAO). This body was formed in 1964 to audit the utilization of the resources allocated to achieve the objectives of the first national five-year plan (1959/60 to 1964/65). Article IV of Law No. 129 of 1964 gave the organization the right to perform the following functions in controlling public enterprises:

1. Auditing the records of the general plan for social and economic development and records required for the follow-up of its implementation; and
2. Auditing costs and results of the various activities and comparing them with planned objectives; verifying that investments were achieved in accordance with projected expenditures; and evaluating their results as compared with projected objectives.

Further, a 1964 presidential decree gave the CAO the right to control the projects of the social and economic development plan, and to follow their implementation for investments, production, exports, employment, consumption, production efficiency, and re-

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[5] Further information on the operation of the uniform accounting system is given in Central Auditing Agency, *The Uniform Accounting System* (in Arabic) (Cairo: Central Auditing Agency, 1967); and Abdel-Pasit A. Radwan, *The Uniform Accounting System and a Study of General Principles in Unifying the Accounting Systems* (in Arabic) (Cairo: Anglo-Egyptian Publishing, 1971).

duction of construction and production costs. This is achieved by investigating and examining the records of these enterprises and evaluating their results. Such an audit would involve, for example, following the execution of investment projects according to estimated costs and within the framework of the plan, controlling the project's implementation according to schedule, checking the attainment of objectives set for the production of goods and services quantitatively and qualitatively, calculating changes in national consumption, savings, and national income, and estimating the plan's effectiveness in achieving economic balance among the different sectors.

In addition to its responsibility for monitoring the national development plan, the CAO is required to audit all institutions which receive or spend public funds, including units of the General Government Administration, public corporations and organizations and their subsidiaries, and any institution subsidized by the state or for which it guarantees minimum profits. In its performance of this function, the CAO does not confine itself to routine financial audit but also undertakes considerable work in respect to performance evaluation.

This involves program auditing (measuring the degree of achievement of annual operating targets set for the various units subject to CAO control), efficiency audit (measuring the degree of efficiency of each unit in utilizing the resources available to it), effectiveness auditing (evaluating whether government programs achieve their expected objectives), and the examination of the implementation of investment projects to ascertain whether investment projects included in the national development plan are implemented within their estimated costs and according to expected time schedules.

Finally, a central department of the CAO is required to follow all financial violations discovered to ensure that appropriate disciplinary measures are taken against the individuals responsible, and it can order the prosecution of any public employee if it considers that the disciplinary measures taken against him by his own employing agency are not compatible with the gravity of his infraction. This prerogative is reserved for the president of the CAO.

To perform these duties, the CAO has a staff of approximately 3,500 auditors with various qualifications in accounting, economics, public administration, and business management, as well as in legal, social, engineering, medical, and agricultural fields. These auditors are assisted by approximately 1,200 administrative and general services staff.

## THE CURRENT THREAT TO THE UNIFORM SYSTEM

One obvious result of the nationalization program and the creation of the CAO was a substantial reduction in the amount and quality of work available for private-sector accountants. The Big Eight firms left Egypt in 1965, and the number of professional accounting firms was greatly reduced. However, President Sadat's introduction of the open-door policy in 1974 encouraged the investment of foreign capital and this, together with his denationalization program, has provided a major stimulus for private-sector accountants. Many of the foreign firms investing in Egypt have insisted on local auditors in independent public practice as opposed to subjecting themselves to government audit. Consequently, many accounting firms have been formed, and they have enjoyed rapid growth. The largest firm is Z. Hassan, H. Hassan, which has increased its staff in Cairo from nearly 20 in 1974 to more than 130 currently.[6] This firm is the Egyptian correspondent of Peat Marwick Mitchell, while the second largest firm, Mostafa Shawki, is associated with Arthur Andersen.

It is clear that the international accounting firms are now attempting to re-establish their presence. The first International Conference on Accounting and Auditing in Cairo in December 1980 included speakers from Peat Marwick Mitchell, Arthur Andersen, Coopers & Lybrand, Binder Hamlyn Fry, Robson Rhodes, Jolliffe Corke, and Inter Conseil (Paris). The recommendations which resulted from this conference and from an earlier national conference in June 1980 are very revealing, for they suggest that private-sector accountants are making a strong attempt to encourage Egyptian accounting to adopt the British and American pattern in which they would have a dominant position.

The main recommendations of the June conference are as follows:

1. Obligatory auditing standards should be produced;
2. Professional offices should be allowed to participate in the audit of public-sector companies;
3. Accounting standards conforming with generally accepted international standards should be prepared;
4. A committee should be formed to attempt to identify the best methods and procedures for dealing with inflation accounting, although historical cost should continue to be the basis for preparing accounts;

[6] M. Renshall, "New Stirrings in Accounting Profession," *World Accounting Report* (February 1981), 25.

5. Committees should be formed to study the possibility of establishing an accounting and auditing institute to represent qualified professional accountants and auditors and also to study methods of training prospective accountants; and
6. All professional services rendered in the fields of accounting, management, economics, and insurance should be rendered through the Egyptian offices which practice this type of work and are registered with the syndicate. Foreign consultants should be allowed to participate in these fields only through the agency of Egyptian offices.[7]

The syndicate referred to is the Syndicate of Commerce Professions, which has approximately 300,000 members, each of whom must have a commerce degree or the equivalent.[8] Approximately 4,200 of these members are registered as auditors. At present, any person with a commerce degree specializing in accounting and auditors after three years' training in a practicing firm are entitled to be entered in the register of accountants. After five years of further practical work, they are entitled to act as auditors of joint stock companies. A graduate may also qualify as an auditor by completing a three-year training contract with a practicing member of the Egyptian Society of Accountants and Auditors. He must pass examinations at the end of the three years, but he is then immediately entitled to audit joint stock companies. The society has only approximately 130 members; it has registered nearly 250 students and is a member of the International Accounting Standards Committee.

The International Conference in December 1980 reiterated the recommendations of the June conference and, in the field of inflation accounting, proposed specifically to support the adoption of current cost accounting.[9] These recommendations are now being implemented. There is also a strong lobby for changes in the law which will enhance the position of accounting firms. These changes include granting members of the Egyptian Association of Accountants and Auditors the sole right to act as independent auditors, establishing the right of independent auditors to act as co-auditors of public-sector companies, and requiring independent auditors to pass a professional examination before registration is permitted.

[7] See Syndicate of Commerce Professions, Recommendations of the National Conference on Accounting and Auditing (June 1980).
[8] See W. T. Baxter, "Finding and Building on Old Foundations," *Accountancy Age* (18 September 1981), 25.
[9] See Syndicate of Commerce Professions, Recommendations of the International Conference on Accounting and Auditing (13-15 December 1980).

Implementation of these recommendations and changes in the law would represent a major move toward the adoption of the British and American accounting system. In many ways this could be very harmful. While it must be admitted that the uniform system has not always worked smoothly in both its accounting and its auditing aspects, its basic structure offers many advantages. In particular, it provides the government with valuable information in the field of economic planning and control, and it emphasizes efficiency as opposed to mere financial compliance in the field of audit. The establishment of a strong private-sector accounting profession is likely to lead to an emphasis, in both training and practice, on external auditing and on external financial reporting to investors, areas which are of relatively low priority for the purposes of economic development. Admittedly, a uniform system, with its emphasis on the information needs of the government, is not in itself incompatible with a strong private-sector accounting profession. Experience suggests, however, that private-sector accountants may over time distort that system by imposing upon it accounting standards which are aimed at the needs of stock market investors and which may differ significantly from the classifications and definitions needed by the government. Finally, there is the real risk that, as private-sector accountants prosper, they will be able to attract the best-qualified accounting staff from the public sector, thus reducing the quality of public-sector accounting and auditing.

## APPENDIX A.

Current Operations Account
For the period. . . .

| Uniform account number | | Uniform account number | |
|---|---|---|---|
| | Revenues from normal operations | | Wages |
| | Production at selling price | 311 | Monetary wages |
| 411 | Net sales of finished production | 312 | Wages in kind |
| 412 | Cost of the difference between beginning and ending finished production | 313 | The company's contribution in national insurance |
| 413 | Valuation difference of finished product inventory (the difference between evaluating finished product at selling price and at cost price) | | General expenditure |
| 414 | Cost of the difference between beginning and ending work in process | 32 | Commodity requirements |
| 415 | Self-constructed assets | 33 | Service acquired |
| 416 | Revenues from operating others' materials | 34 | The purchase of finished goods purchased for sale |
| 417 | Services sold | 35 | Current transferred expenses |
| | Finished goods purchased for sale | 351 | Taxes and custom duties |
| 4181 | Net sales | 3511 | Custom duties |
| 4182 | Cost of the difference between beginning and ending of final goods purchased for sale | 3512 | Production excise |
| 4183 | Valuation difference of finished goods purchased for sale | 3513 | Treasury excise |
| | Subsidies | 3513 | Other taxes |
| 421 | Production subsidies | 352 | Depreciation |
| 422 | Export subsidies | 3522 | Buildings & construction |
| | | 3523 | Machinery & equipment |
| | | 3524 | Means of transportation |
| | | 3525 | Tools |
| | | 3526 | Furniture |
| | | 3527 | Animals |
| | | 3528 | Deferred revenue expenditures |
| | | | Rent expenses |
| | | 353 | Rent |
| | | 354 | Variance of imputed rent |
| | | | Interest expenses |
| | | 355 | Local interest |
| | | 356 | Foreign interest |
| | | 357 | Variance of imputed interest |
| | | 358 | Valuation difference of finished production inventory |
| | | 359 | Variation difference of goods purchased for sale |
| | Losses from normal operations (Carried forward) | | Surplus from normal operations (Carried forward) |

**APPENDIX A. (cont.)**

Current Operations Account
For the period. . . .

| Uniform account number | | Uniform account number | |
|---|---|---|---|
| | Surplus from normal operations (brought forward) | | Losses from normal operations (brought forward) |
| 43 | Revenue from securities | | |
| 44 | Transferred revenues | 36 | Current transfers |
| 441 | Interest earned | 361 | Gifts |
| 442 | Rents earned | 362 | Contributions to others |
| 443 | Capital profits | 363 | Fines |
| 444 | Prior years' revenues | 364 | Capital losses |
| 445 | Fines earned | 365 | Prior years' expenses |
| 446 | Other revenues | 366 | Bad debts |
| 447 | Variance of imputed rent | 367 | Allowances (not for depreciation) |
| 448 | Variance of imputed interest | | |
| | | 369 | Income taxes |
| 2812 | Current losses | 381 | Distributable surplus |
| | Distributable surplus | | Current losses |
| | | | Reserves |
| | | 221 | Legal reserve |
| | | 222 | Reserve for government bonds |
| | | 223 | Reserve for financing expansion projects |
| | | 224 | General reserve |
| | | 225 | Reserve for repayment of government contribution |
| | | 226 | Reserve for increase in assets prices |
| | | 227 | Other reserves |
| | | 228 | Forwarded surplus |
| | | | Distributed surplus |
| | | 2643 | Employees |
| | | 2641 | State |
| | | 2642 | Shareholders |
| | | 2644 | Others |

**APPENDIX B.**

Production and Trading Account
For the period . . . .

| Uniform account number | | Uniform account number | |
|---|---|---|---|
| 414 | Cost of the difference between the beginning and the ending work in process | | Cost of production centers |
| | | 531 | Wages |
| | | 532 | Commodity requirements |
| | Cost of production (carried forward) | 533 | Service required |
| | Revenues from normal operations | 535 | Current transferred expenses |
| | Production at selling price | | Cost of production service centers |
| 411 | Net sales of finished product | 631 | Wages |
| 412 | Cost of the difference between beginning and ending firm's products | 630 | Commodity requirements |
| | | 633 | Service acquired |
| 413 | Valuation difference of finished product inventory (the difference between evaluating finished product at selling price and at cost price) | 635 | Current transferred expenses |
| | | | Cost of production (brought forward) |
| | | 534 | Finished goods purchased for sale |
| 416 | Revenues from operating others' materials | | Valuation difference of inventory: |
| 417 | Services sold | 358 | Finished product |
| | Finished goods purchased for sale | 359 | Finished goods purchased for sale |
| 4181 | Net sales | | |
| 4182 | Cost of the difference between beginning and ending finished goods purchased for sale | | Gross production surplus (carried forward) |
| 4183 | Valuation difference of finished goods purchased for sale | | Gross production deficit |
| | Gross production deficit (carried forward) | | Cost of marketing centers |
| | Gross production surplus | 731 | Wages |
| | | 732 | Commodity requirements |
| | Subsidiaries | 733 | Services acquired |
| 421 | Production subsidiaries | 735 | Current transferred expenses |
| 422 | Export subsidiaries | | |
| | Gross production and trading deficit (carried forward to profit and loss account) | | Gross production & trading surplus (carried forward to profit and loss account) |

**APPENDIX C.**

Profit and Loss Account
For the period . . . .

| Uniform account number | | Uniform account number | |
|---|---|---|---|
| | Gross production & trading surplus (brought forward) | | Gross production & trading losses (brought forward) |
| 43 | Revenue from securities | | |
| | Transferred revenues | | Cost of administration and financing centers |
| 441 | Interest earned | 831 | Wages |
| 442 | Rent earned | 832 | Commodity requirements |
| 443 | Capital profits | 833 | Services acquired |
| 444 | Prior years' revenues | 835 | Current transferred expenses |
| 445 | Fines earned | | |
| 446 | Others: | | Current transfer |
| 4461 | Revenues from scrap sold | 361 | Gifts |
| 4462 | Discount earned | 362 | Contributions to others |
| 4463 | | 363 | Fines |
| 4464 | Profit from raw material sold | 364 | Capital losses |
| 4465 | Commissions earned | 365 | Prior years' expenses |
| | | 366 | Bad debts |
| | | 367 | Allowances (not for depreciation) |
| | | 368 | Rates |
| | Net deficit (carried forward) | | Net surplus (carried forward) |
| | Net surplus (brought forward) | | Net deficit (brought forward) |
| | | 369 | Income Tax |
| | | | Distributable surplus |

Appropriation Account

Surplus (profit) is distributed in the same manner as is shown in the bottom of Current Operation Account (p. 151)

**APPENDIX D.**

Value Added Statement
For the Period . . . .

| Uniform account number | Items | £ | £ |
|---|---|---|---|
| | Production at selling price: All the items which are shown in the current operation accounts under the same title should be shown here separately, i.e., from account 411 until account 4183) | | XXX |
| 34 | Less: the purchase cost of finished goods purchased for sale | | XXX |
| | Value of production and services at selling price | | XXX |
| 42 | Add: subsidies | | XXX |
| | | | XXX |
| 3511 | Less: custom duties | XXX | |
| | other taxes (such as stamps, rates, and vehicle road tax) | XXX | |
| | | | XXX |
| | Value of production and services at cost of factors of production | | XXX |
| 32 | Less: commodity requirements | XXX | |
| 33 | service acquired | XXX | |
| | | | XXX |
| | Gross value added | | XXX |
| | Less: depreciation | | XXX |
| | Net value added at cost of factors of production | | XXX |
| | Distribution of value-added | | |
| 31 | Wages | | XXX |
| 353 | Rent | | XXX |
| 354 | Variance of imputed rent | | XXX |
| 355 & 356 | Interest (domestic and foreign) | | XXX |
| 357 | Variance of imputed interest | | XXX |
| 358 | Valuation difference of finished products inventory | | XXX |
| 359 | Valuation difference of finished goods purchased for sale | | |
| | Surplus from normal operations | | XXX |
| | | | XXX |

# *Performance of Accountants in International Business*

GARY A. LATANICH and JOHN KAMINARIDES*

As the pace of international trade quickens, the multiplicity of accounting methods hinders further growth. This explains the impetus for internationalization of the world's economies, in addition to the efforts to eliminate the differences in accounting systems and standards, a process called harmonization. Another major force behind harmonization is the need for companies to raise outside capital.[1] This growing competition for domestic and international funds has forced a certain amount of harmonization. The importance of international business and accounting has now been recognized at the undergraduate textbook level. Witness the preface to an international accounting text in which Choi and Mueller state that "academe now requires an international component in higher education for business, as a condition for school and curriculum accreditation."[2]

Although the recognition of the importance of international business has been slower in the United States than in other countries, it has increased since the mid-seventies. In 1974, the American Assembly of Collegiate Schools of Business changed its accreditation standards to include a requirement that the international dimension of business be added to the curricula. In 1978,

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[1] J. S. Arpan and Lee H. Radebaugh, *Accounting and Multinational Enterprises* (Boston: Warren, Gorham and Lamont, 1981).

[2] Frederick D. S. Choi and Gerhard G. Mueller, *International Accounting* (Englewood Cliffs, N.J.: Prentice-Hall, 1984).

the American Accounting Association specifically recommended the internationalization of the accounting curricula. These official actions indicate the opportunity and necessity for educators in business and accounting to enhance the understanding of the international dimension of their chosen field of study.

The specific purpose here is to determine the extent of expenditure of resources and effort attributable to the academic accountants in U.S. universities. More specifically, in regard to international business, how do academic accountants compare with other disciplines in a college of business? The objective of this research study was to survey business faculty to determine (1) their formal training in the area of international business; (2) their interest in international business, as expressed through participation in professional meetings and membership in international business associations; and (3) their experience in the area of international business as evidenced by publications and research, and foreign language capability.

## METHODOLOGY EMPLOYED

A statistical sampling design was used. The mail questionnaire method was chosen to obtain faculty responses. The survey was nationwide. Questionnaires with instructions were sent to the deans of the college of business of 278 universities to be given to randomly selected professors in all disciplines. In total, 2,800 questionnaires were sent to all schools selected for the survey.

There were 730 valid faculty responses to the survey. The percent distribution of these responses by size of institution is reported in exhibit 1. The table indicates that schools of sizes 5,000 to 9,999 students and 10,000 to 24,999 students had a

**Exhibit 1. Distribution of Faculty by Size of Institution**

| Size | Percent |
|---|---|
| 500- 999 | 2.7 |
| 1,000- 1,999 | 9.3 |
| 2,000- 4,999 | 18.9 |
| 5,000- 9,999 | 31.1 |
| 10,000-24,999 | 29.2 |
| 25,000-49,999 | 8.8 |
| | 100.0 |

majority participation in the survey. Their responses represented 60.3 percent of the total responses.

Exhibit 2 reports the percent distribution of responding faculty by academic department.

## SURVEY FINDINGS

### Specialization in International Business

Of faculty who have a degree in international business or an area of specialization in international business, the highest percentage belonged to those in economics, followed by those in business administration (exhibit 3, column 1). The percentage of international specialization in accounting was only slightly better than for the composite group called "Others," of which 2.51 percent had specialities in international business.

**Exhibit 2. Distribution of Respondents by Department**

| Department | Percent |
|---|---|
| Accounting | 11.5 |
| Economics | 17.7 |
| Finance | 9.0 |
| Management | 19.9 |
| Marketing | 12.0 |
| Business Administration | 24.7 |
| Other | 5.2 |
| | 100.0 |

**Exhibit 3. Distribution of Faculty by Discipline and Qualification**

| Department | 1<br>Specialization in international business | 2<br>Foreign language capability | 3<br>Experience in international business | 4<br>Published or unpublished research in international business | 5<br>Workshop attendance | 6<br>Membership in an international business association |
|---|---|---|---|---|---|---|
| Accounting | 2.71 | 8.12 | 8.56 | 6.61 | 7.54 | 5.27 |
| Economics | 23.32 | 25.85 | 18.66 | 21.39 | 14.96 | 15.98 |
| Finance | 15.53 | 4.70 | 7.45 | 11.76 | 12.26 | 4.32 |
| Management | 15.27 | 23.79 | 22.29 | 14.81 | 20.72 | 22.64 |
| Marketing | 18.86 | 17.39 | 15.22 | 17.50 | 17.11 | 20.37 |
| Business administration | 21.67 | 17.39 | 24.03 | 19.55 | 23.67 | 22.74 |
| Others | 2.51 | 2.65 | 3.70 | 3.33 | 3.74 | 3.68 |

### Foreign Language Capability

As to foreign language capability, economics and management faculty had the highest percentage of respondents with this characteristic (exhibit 3, column 2). They were followed by marketing and business administration faculty, with the accounting percentage only exceeding the finance percentage.

### Experience in International Business

The faculty members with the most experience in international business were in the business administration departments, followed closely by the management departments (exhibit 3, column 3). Economics and marketing faculty lagged somewhat, while the accounting faculty was next to last, with finance faculty having the least experience in international business.

### Published and Unpublished Research in International Business

The most prolific researchers in international business are in the economics department (exhibit 3, column 4). The accounting department members ranked lowest in having published or researched in the area of international business.

### Workshop Attendance

The faculty members most frequently attending international workshops are in the business administration departments (exhibit 3, column 5). The lowest percentage of participants involved in international business workshops belongs to the accounting department, 7.54 percent.

### Membership in an International Business Association

Of the faculty reporting membership in an international business association, business administration and management faculty have virtually the same percentages (exhibit 3, column 6). The department with the lowest percentage of faculty holding membership in an international business association is finance.

## POTENTIAL HYPOTHESES

While this study was not predicated on the belief that a productivity differential existed, the findings beg the question of why the accounting productivity differential should be so great. Four hypotheses will be offered in an attempt to explain the survey findings.

First, over 60 percent of the respondents were affiliated with institutions having a student population of less than 10,000. In such institutions, the standard teaching load is generally twelve hours per semester. This teaching load has traditionally been offered as an explanation for a lack of research productivity in

many areas. While this is at times a possible explanation, in this case, the focus is on relative differentials in terms of research, experience, and foreign language, not absolute levels. To the extent that they affect performance, twelve-hour teaching loads affect performance in all departments. Our study shows that the shortfall, with some exceptions, mainly affects accounting. Thus, the argument of excessive teaching loads does not seem applicable in this case.

A second hypothesis, a variation of the first, suggests that standard teaching loads are misleading, and that differences endemic to certain academic areas more severely restrict professional development. Specifically, in the accounting area, market demand probably precludes most academic departments from giving released time from teaching for the purpose of research or other professional activities. The degree of market demand in accounting is reported in exhibit 4, column 4. The starting salary for new doctorates in accounting is almost $6,000 higher than for those in economics and more than $4,000 higher in other fields except for finance. Finance salaries for new doctorates approximates the accounting salary, and finance had the second lowest productivity in the international area after accounting. A possible lack of released time must be given serious consideration as an explanation for the productivity differential. In addition, rapidly changing technical information has been suggested as a complicating factor, implying that the academic accountant must spend an inordinate amount of time keeping abreast of current procedures in the field. While plausible, it is not clear whether the increasing complexity

**Exhibit 4. 1984-85 Business Faculty Salaries by Discipline**

| | (1) Professor | (2) Associate professor | (3) Assistant professor | (4) New doctorate |
|---|---|---|---|---|
| | (Mean $ in 000) | | | |
| Accounting | 44.3 | 36.4 | 31.2 | 33.4 |
| Economics | 42.0 | 32.8 | 27.3 | 27.7 |
| Finance | 45.0 | 36.7 | 32.7 | 34.5 |
| Management | 41.2 | 33.9 | 29.4 | 31.1 |
| Marketing | 43.5 | 35.4 | 30.8 | 33.1 |
| Quantitative methods | 43.5 | 34.6 | 30.7 | 31.5 |
| Business education | 35.3 | 29.2 | 24.5 | 25.5 |
| Business law | 39.4 | 31.6 | 26.5 | 25.6 |
| Information systems | 41.5 | 35.2 | 30.4 | 33.8 |

**Source:** AACSB salary survey, and U.S. Department of Labor, Bureau of Labor Statistics.

in the accounting field exceeds the increased complexity generated in other fields, such as economics, by the proliferation of theoretical models; thus, we discount this explanation.

A third hypothesis suggests that the explanation lies in the salary structure. Excessive market demand which is reflected by a large salary differential may not generate the same incentive to produce. In a publish or perish atmosphere, failure to publish may not imply contract termination if a replacement cannot be found or can be found only at a substantially higher price. While seemingly a good economic argument, this is weakened when we examine the salary structure of assistant, associate, and full professors. As we move up the rank hierarchy, the salary differential in favor of accountants narrows to near zero at the full professor rank, while productivity shows no increase as the differential narrows. Unless new doctorates are the only potential publishers, salary differentials as an explanation for the lack of productivity is weak at best.

A fourth hypothesis is actually suggested by information presented in exhibit 3. As column 1 of exhibit 3 indicates, the percentage of respondents who have a specialization in international accounting is only 2.71. It is more than slightly possible that research, publication, experience, workshop attendance, or simply interest in international accounting may be a lagged function of the number of practitioners who majored or have degrees in the international area. This being the case, once it is known that few, if any, have a degree or specialization in international accounting, it becomes equally obvious that other measures of performance in the international area would also be low. Can the lack of specialists in international accounting be attributed to the fact that it is a new area? The answer would seem to be yes. In an article in the *Journal of Accounting Education,* Agami discusses the appropriate place for a course in international accounting (undergraduate versus graduate level).[3] The article does *not* discuss the appropriate location for a major in international accounting but only a single course in accounting. He states that the number of known international accounting texts is only seven; readings texts, only eight; journals specializing in international accounting number no more than two. Such a void in terms of resources and terminally qualified people, due to newness of the discipline, must be considered a major limitation when assessing the relative productivities in the area of international business.

[3] A. M. Agami, "The International Accounting Course State of the Art," *Journal of Accounting Education,* vol. 1, no. 2 (1983), 73-74.

## SUMMARY

Exhibit 3 presents the detailed distribution of international business performance of faculty by academic discipline. It would appear from these data that the degree of productivity of accounting faculty in the area of international business is relatively low, in most cases exceeding only finance (and the composite group "Other").

It should be stressed that this study was concerned with relative degrees of productivity. This is not to say that the absolute level of productivity in international business in accounting is not sufficient. What we do find is a *relative* lack of formal training (specialization), experience (foreign language capability, actual experience, and research and publication), and interest (workshop attendance and association membership).

While no one simple theory can completely explain the relative lack of productivity, some possible explanations have emerged. First, to the extent that market demand prevents accountants from receiving released time for research, a productivity lag is to be expected. Second, a favorable salary structure may strengthen the bargaining hand of the academic accountant — especially new doctorates, thus leading to a possible preference for mobility over research and publication. Finally, to the extent that professional activity in any area is functionally related to the number of trained practitioners, the newness of international accounting mitigates its relative performance.

Although current performance may not be as high in accounting as it is in other disciplines, the need and opportunities for accountants in international business continue to grow. For all of the world's economies, international trade has increased as a percentage of their gross national product. For example, from 1965 to 1977, foreign trade increased from 7 to 14 percent in the United States, 20 to 35 percent in France, and 30 to 42 percent in Germany. This increased trade among nations suggests the need for increased business and accounting harmonization, thus creating opportunities for accountants in the area of international accounting.

## APPENDIX. INTERNATIONAL BUSINESS SURVEY, ARKANSAS STATE UNIVERSITY, COLLEGE OF BUSINESS

This SBAA-supported survey is being conducted to determine the qualifications, interest, and emphasis of faculty members in regard to international business. Please check or fill in the appropriate blanks.

1. Academic department and university.
2. Highest college degree held.
3. Date of last degree.
4. Present academic rank.
5. Into which age category do you fall?
6. Do you have a degree or an area of specialization in international business?
7. Is your institution accredited by AACSB?
8. If not accredited by AACSB, is your institution moving to meet AACSB standards?
9. Does your institution have an exchange program with any foreign institutions?
10. Are the library holdings adequate in international business in your subject area?
11. Have you published or researched in the area of international business?
12. Do you speak a foreign language?
13. Are you a member of an international business association?
14. Have you attended or participated, during the last three years, in any international business workshops or meetings?
15. Do you have any applied experience in the area of international business (including travel)?
16. In which courses that you have taken was international business discussed to any significant extent?
17. In your opinion, what courses should contain international business topics?
18. In what courses generally taught by you should international business aspects be introduced?
19. Should the emphasis on international business in college curricula be increased or decreased?
20. Should international business topics be lumped into separate courses and/or integrated into the "common body of knowledge"?
21. To what extent do your assigned texts adequately reflect the international aspects of business?

REPLIES WILL BE HANDLED IN THE STRICTEST CONFIDENCE AND WILL BE USED ONLY IN STATISTICAL ANALYSIS. PLEASE DO NOT SIGN YOUR NAME.

# *Implementing the New Foreign Currency Rules in Canada and the United States: A Challenge to Professional Judgment*

J. H. AMERNIC and B. J. B. GALVIN*

The Financial Accounting Standards Board (FASB) in the United States and the Canadian Institute of Chartered Accountants (CICA) have been making "second attempts" to set generally accepted standards for the translation of foreign currency financial statements. In addition, the U.K.'s Accounting Standards Committee issued its first comprehensive standard on the topic in 1983.[1] The foreign currency translation issue has had a complex and at times acrimonious history, not only in Canada and the United States, but also in the United Kingdom, and elsewhere.[2] In Canada, the previous authoritative pronouncement (Section 1650 of the CICA *Handbook*) was suspended on February 23, 1979, only four months after its promulgation, and revised and re-introduced in June 1983 to conform in essence with FASB No. 52. The controversy sur-

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[1] Financial Accounting Standards Board, *Statement of Financial Accounting Standards No. 52 — Foreign Currency Translation* (Stamford, Conn.: FASB, 1981); Canadian Institute of Chartered Accountants, Section 1650, "Foreign Currency Translation," CICA *Handbook* (Toronto: CICA, 1983); and Accounting Standards Committee, *Statement of Standard Accounting Practice No. 20 — Foreign Currency Translation* (Toronto: ASC, 1983).

[2] See C. W. Nobes, "A Review of the Translation Debate," *Accounting and Business Research* (Autumn 1980), for an excellent overview of events in the United States and the United Kingdom up to 1980, especially Table C, 423.

rounding FASB No. 8 from its inception to its replacement by FASB No. 52 is well known.

Both the FASB and the CICA have adopted positions on foreign currency translation which require the explicit exercise of professional judgment on the part of preparers (managers) and auditors. Our purpose in this paper is to assess empirically the potential success of the exercise of this judgment in the application of the new foreign currency translation rules. The new requirements center on the degree to which the foreign investee's operations are independent of the investor company. Those foreign operations which are independent are translated using the current rate method; those which are not are translated using the temporal method. The FASB uses the concept of "functional currency" to determine whether or not the foreign investee is independent. A firm's functional currency is defined by the FASB:

> An entity's functional currency is the currency of the primary economic environment in which the entity operates; normally, that is the currency of the environment in which an entity primarily generates and expends cash.[3]

FASB No. 52 essentially requires that the current rate method be used if the firm's functional currency is the foreign currency, and that the temporal method be used if the functional currency is the parent company's currency.

The Canadian pronouncement in (revised) Section 1650 accomplishes the same classification by using the investee classifications of "integrated foreign operations" and "self-sustaining foreign operations" and thus does not employ the functional currency concept.[4] In the Canadian approach, Section 1650 defines an integrated foreign operation as one "which is financially or operationally interdependent with the reporting enterprise, . . ." and a self-sustaining foreign operation as one "which is financially and operationally independent of the reporting enterprise. . . ."[5]

The CICA provided certain criteria in an appendix to the

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[3] FASB No. 52, 3, 77.

[4] For a critical discussion of the functional currency approach, see Joel H. Amernic and Brian J. B. Galvin, "Foreign Currency Translation: The Debate Goes On," *CA Magazine* (March 1981). In this article, we argued for using a classification plan very similar to the one which the CICA uses.

[5] Both definitions make it clear that it is the degree of exposure to exchange rate changes that determine the foreign operation's classification as "integrated" or "self-sustaining." In the former case, exposure extends to all transactions and activities as if they had been undertaken by the reporting enterprise; in the latter case, exposure is limited to the reporting enterprise's net investment in the foreign operation.

exposure draft preceeding the reissuance of Section 1650 in order to help managers and auditors decide whether a particular foreign operation is integrated or self-sustaining.[6]

Both the new Canadian Section 1650 and FASB No. 52 are based on the normative concept that different types of foreign currency operations should be accounted for differently.[7] Putting aside the rather thorny question of whether or not "self-sustaining" subsidiaries (or, in the terms of FASB No. 52, those subsidiaries whose functional currency is the foreign monetary unit) should be consolidated at all, these two documents represent an explicit recognition by the accounting profession in both countries that "different circumstances" require different accounting techniques for fair presentation. Other recent pronouncements in the two countries have both provided support for and against this concept; for example, FASB No. 13 and CICA *Handbook* Section 3065 permit accountants to exercise professional judgment in discriminating between capital and operating leases for leasees while, on the other hand, FASB No. 2 requires that all research and devel-

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[6] Canadian Institute of Chartered Accountants, Appendix A, *Exposure Draft — Foreign Currency Translation,* reproduced here as exhibit 3.

[7] Perhaps the most comprehensive attempt at drafting a theory of translation within a normative accounting theoretic framework is that by Patz. See Dennis Henry Patz, "A General Theory for the Translation and Consolidation of Foreign Accounts" (Ph.D. dissertation, The University of Texas at Austin, 1975), and Idem, "The State of the Art in Translation Theory," *Journal of Business Finance and Accounting,* vol. 4, no. 3 (1977), 311-25. Patz theorizes that if the parent-subsidiary relationship is of a "proprietary" nature, "maximization of remittable earnings" is the pre-eminent objective of the firm, and *measuring* remittable earnings is of fundamental importance. He argues that a temporal approach would best accomplish this objective. On the other hand, if the parent-subsidiary relationship is of an "entity" nature, "local position and success in local operations, is seen as the appropriate focal point for periodic reporting . . . [and] the utility of foreign held resources of interest to users of translated accounting data is their foreign utility, the command over goods and services they bestow upon the multinational entity abroad" ("The State of the Art," 319). Consequently, the focus is now on the *restatement* of the foreign operations' financial results in domestic dollars, and the preservation of financial relationships in the foreign statements. Thus, the current rate method might be appropriate here.

The relationship of Patz's "proprietary" classification to the CICA's "integrated" foreign operation is obvious, as is the relationship of the "entity" classification to the "self-sustaining" foreign operation. That "different circumstances" *should* result in different accounting techniques being used (a normative statement) seems to be one of the more accepted suggestions in the literature. Whether in fact differences in circumstances lead to different accounting techniques being adopted by reporting companies is a moot point — some systematic evidence exists to the contrary. See, for example, Lanny G. Chasteen, "Economic Circumstances and Inventory Method Selection," *ABACUS* (June 1973), 22-27, for U.S. evidence, and Joel H. Amernic, "Accounting Practices in the Canadian Petroleum Industry," *CA Magazine* (March 1979), for Canadian evidence.

opment expenditure be expensed as incurred, thus ignoring possible economic differences.[8]

Even though the mandate to exercise judgment in FASB No. 52 and CICA Section 1650 is attractive,[9] and much less arbitrary than pronouncements such as the withdrawn FASB No. 8 (which required all foreign investees to be accounted by using the temporal method) and FASB No. 2, very often the exercise of professional judgment is complicated by the fact that the underlying variable is continuous (for example, the degree to which a foreign investee of a Canadian firm is integrated or self-sustaining), while the output of the decision is dichotomous (for example, for FASB No. 52 and new Canadian Section 1650, either the current rate method or the temporal method is used).

If the distribution of companies on the continuous underlying variable is U-shaped, as in exhibit 1, classification errors may be expected to be minimal. Thus, investees whose results are reported using the current rate method will be clearly self-sustaining; those whose results are reported using the temporal method will be clearly integrated. On the other hand, if the distribution of companies takes on an inverted U-shape, as in exhibit 2, virtually identical foreign subsidiary situations may be classified differently by different accountants, and the number of misclassifications would be expected to be large.

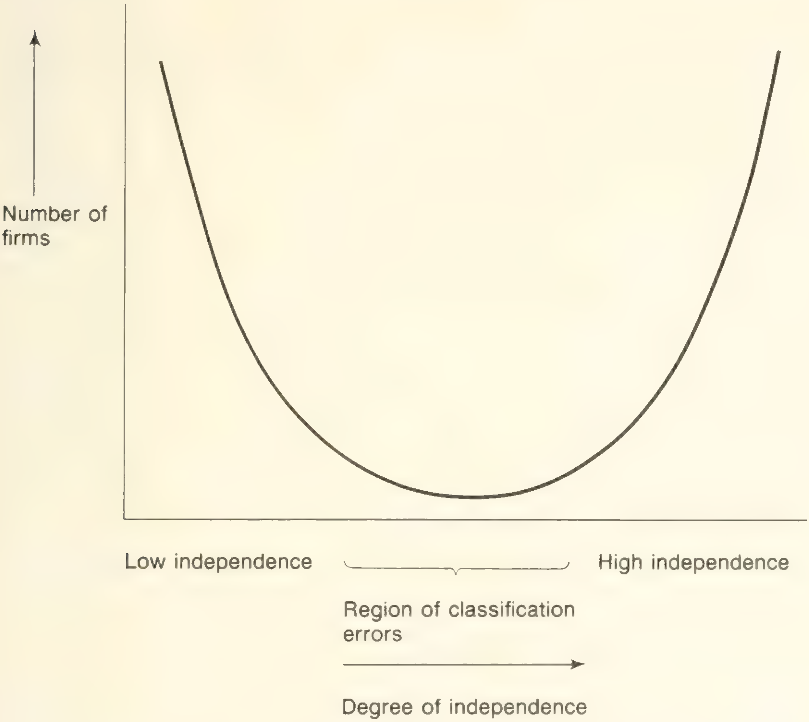
The situation is further complicated when we attempt to make operational the underlying continuous variable by looking at specific indicators. For example, the CICA exposure draft contains an appendix (reproduced in exhibit 3) which identifies "[some] of the matters to be taken into consideration in establishing whether the foreign operations would be classified as integrated or self-sustaining." What if different indicators give different signals? For instance, what if the CICA's "sales market" criterion presented in exhibit 3 suggests an integrated operation, but the "financing" criterion suggests a self-sustaining operation?

These two problems of (1) the possibility that most foreign

[8] The recently issued FAS No. 86 modified this and permits capitalization of certain computer software development costs if they meet defined criteria, but all other research and development costs continue to be expensed.

[9] The exercise of professional judgment becomes crucial in identifying which of the "different circumstances" is present in a given situation. CICA Section 1650 explicitly refers to the need for judgment in paragraph .10: "Professional judgment is required in evaluating the economic factors which determine the exposure of a reporting enterprise to exchange rate changes." (The paragraph then indicated six factors, such as cash flows, sales prices, etc., which should be considered — a list similar to Appendix A of the exposure draft — see footnote 6 of this article.)

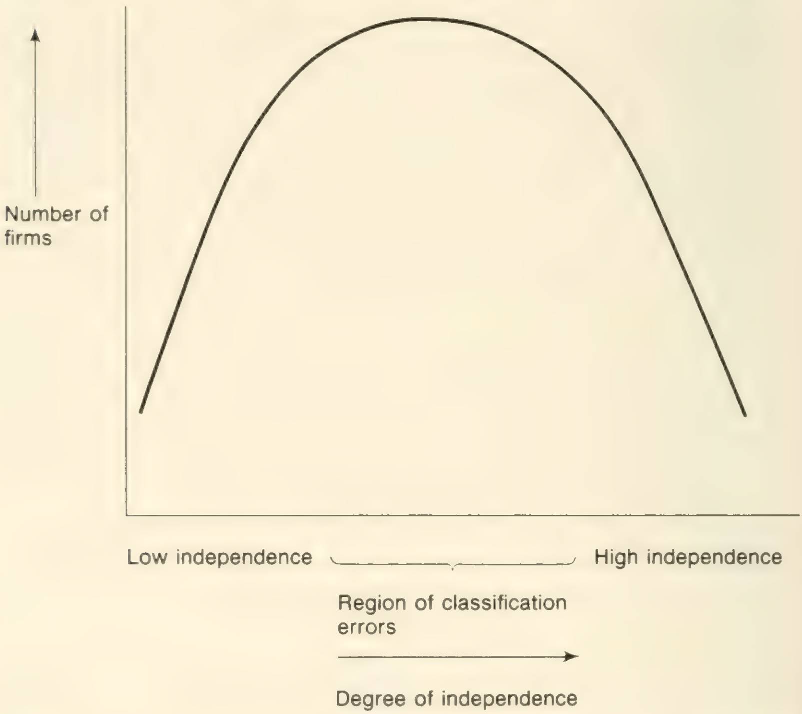
**Exhibit 1. Distribution of Foreign Subsidiaries along a Continuum Representing the Degree of Independence from the Domestic Parent — Case A**




| Corresponds to "integrated foreign operations" under the Canadian Section 1650 and a situation in which the U.S. dollar is the functional currency under FASB No. 52. | Corresponds to "self-sustaining foreign operations" under the Canadian Section 1650, and a situation in which the foreign monetary unit is the functional currency under FASB No. 52. |
|---|---|

operations are neither clearly dependent nor clearly independent on the basis of some overall measure, and (2) the possibility that specific measures may conflict, lead to the following: in situations in which it is not obvious which of two equally acceptable but mutually exclusive accounting methods may be used, and the two methods result in materially different reported results, pressures other than the desire for fair reporting may enter into the decision. In such situations, the external auditor may be hard-pressed to defend his or her view to management because of the ambiguity

**Exhibit 2. Distribution of Foreign Subsidiaries along a Continuum Representing the Degree of Independence from the Domestic Parent — Case B**




of the underlying evidence. It is probable that the foreign currency translation situation under the new FASB No. 52 rules and the CICA Section 1650 is such a case since:

1. It may be difficult to distinguish self-sustaining from integrated foreign operations (CICA) or — equally — situations in which the functional currency is the foreign currency from situations in which it is the domestic currency (FASB No. 52).
2. The two methods — current rate and temporal — lead to radically different reported results. Under FASB No. 52 and CICA Section 1650, use of the temporal method generates income effects,[10] while use of the current rate method results in a debit or credit to equity. The differences are material, and thus could

[10] The Canadian Section 1650 defers and amortizes the translation adjustments (par. .23), while FASB No. 52 flows them through income.

**Exhibit 3. Appendix A of CICA's Exposure Draft**

As noted in par. 10, whether the activities of a foreign operation are integrated or self-sustaining depends upon the economic facts and circumstances surrounding those operations. It is neither possible nor desirable to provide unequivocal criteria to establish how a reporting enterprise should classify foreign operations whose financial statement items or accounts are being incorporated in its financial statements. Although such an approach might accomplish uniformity, the relevance of the resulting information might well be questioned.

Some of the matters to be taken into consideration in establishing whether the foreign operations would be classified as integrated or self-sustaining are as follows:

| Integrated foreign operations | Self-sustaining foreign operations |
|---|---|
| (a) *Cash flows* of the foreign operation directly impact the cash flows of the reporting enterprise on a current basis and are readily available for remittance to the reporting enterprise. | *Cash flows* of the foreign operation do not have a direct impact on the cash flows of the reporting enterprise. |
| (b) *Sales prices* for the foreign operation's products are determined by worldwide competition or by international prices, and are primarily responsive on short-term basis to changes in exchange rates. | *Sales prices* for the foreign operation's products are determined more by local competition or local government regulations than by worldwide competition and international prices; such sales prices are not primarily responsive on a short-term basis to changes in exchange rates. |
| (c) The *sales market* for the products of the foreign operation is dependent on the market for the products of the reporting enterprise. | The *sales market* for the products of the foreign operation is independent of the market for the products of the reporting enterprise. |
| (d) *Labor, material and other costs* for the foreign operation's products or services, on a continuing basis, are primarily costs for components obtained from the reporting enterprise or its associated companies. | *Labor, material and other costs* for the foreign operation's products or services are primarily local costs, and are not, on a continuing basis, primarily reimbursements of costs of the reporting enterprise or its associated companies. |
| (e) *Financing* is primarily from the reporting enterprise; or funds generated by the foreign operation's activities are not sufficient to service its obligations and infusion of additional funds from the reporting enterprise is required. | *Funds generated* by the foreign operation are sufficient to service existing and normally expected debt obligations (both local and foreign) without the infusion of additional funds by the reporting enterprise. Financing arrangements would normally be made by local management (this would not necessarily be negated by a policy of the reporting enterprise to centralize financing arrangements for all operations in the group). |
| (f) *Intercompany transactions* are a dominant part of the foreign operation. | *Intercompany transactions* are not a dominant part of the foreign operation. |

It should be emphasized that the matters outlined above, which should be considered both individually and collectively, are merely indicators of how the foreign operation should be classified.

be justified only if they reflect "different circumstances." It is in these situations that the view of the "positivist school" of accounting scholars may be most relevant.[11]

Our focus in this paper is on an empirical assessment of the degree to which different measures of investee independence give different signals — thus, our main interest concerns problems of implementing the rules in the new U.S. and Canadian foreign currency positions. Measures of investee independence are examined in the following two major ways:

1. An examination of the distribution of various aggregated and disaggregated investee independence criteria. Ideally, as suggested previously, measures of investee independence should exhibit a U-shape to minimize classification "errors" and possible conflict between auditors and client. Thus, we can form the null hypothesis that the measures do have a U-shape, and we can examine actual measures of investee independence for a sample of Canadian companies.
2. An examination of the different signals provided by different measures of independence for the same investee. Ideally, different measures of independence should give the same signal, again to minimize classification errors and auditor-client conflict. Thus, we can form the null hypothesis that various measures of investee independence are significantly correlated.

## MEASURES OF INVESTEE INDEPENDENCE AND THE SAMPLE COMPANIES

The sample firms described here were administered a questionnaire that included several questions related to the degree to which foreign investee companies were "independent." The questions are listed in exhibit 4; it may be seen that they are similar to FASB No. 52 and Candian Section 1650 independence guidelines.

The questionnaire was sent to a sample of 203 Canadian public

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[11] The "positivist school" is represented by papers such as Ross L. Watts and Jerold L. Zimmerman, "Towards a Positive Theory of the Determination of Accounting Standards," *Accounting Review* (January 1978), 112-34. Authors writing in this area are interested in forces determining accounting standards. As Watts and Zimmerman state (pp. 112 and 113): "Such a theory will help us to understand better the source of the pressures driving the accounting standard-setting process, the effects of various standards on different groups of individuals and the allocation of resources, and why various groups are willing to expend resources trying to affect the standard-setting process. This understanding is necessary to determine if prescriptions from normative theories . . . are feasible." Recently, the "positivist school" in accounting has been harshly criticized on methodological grounds. See Charles Christenson, "The Methodology of Positive Accounting," *Accounting Review* (January 1983), 1-22.

**Exhibit 4. Independence Questions and Responses**

1. How would you rate the degree to which the foreign operation(s) is (are) independent in each of the following areas?
(Note: If there are major differences among foreign operations, please indicate below or overleaf).

| | | Highly independent | | | | Highly dependent |
|---|---|---|---|---|---|---|
| Marketing n = 72 | | 1 | 2 | 3 | 4 | 5 |
| | number | 30 | 16 | 10 | 5 | 11 |
| | percent | 41.7 | 22.2 | 13.9 | 6.9 | 15.3 |
| Personnel policies n = 74 | | 1 | 2 | 3 | 4 | 5 |
| | number | 23 | 18 | 15 | 9 | 9 |
| | percent | 31.1 | 24.3 | 20.3 | 12.2 | 12.2 |
| Capital investment n = 73 | | 1 | 2 | 3 | 4 | 5 |
| | number | 2 | 9 | 9 | 27 | 26 |
| | percent | 2.7 | 12.3 | 12.3 | 37.0 | 35.6 |
| Accounting and control systems n = 73 | | 1 | 2 | 3 | | |
| | number | 13 | 9 | 18 | 16 | 17 |
| | percent | 17.8 | 12.3 | 24.7 | 21.9 | 23.3 |
| Raising capital n = 73 | | 1 | 2 | 3 | 4 | 5 |
| | number | 5 | 4 | 8 | 10 | 46 |
| | percent | 6.8 | 5.5 | 11.0 | 13.7 | 63.0 |
| Tax planning n = 72 | | 1 | 2 | 3 | 4 | 5 |
| | number | 13 | 7 | 12 | 17 | 23 |
| | percent | 18.1 | 9.7 | 16.7 | 23.6 | 31.9 |
| Research and development n = 68 | | 1 | 2 | 3 | 4 | 5 |
| | number | 13 | 8 | 14 | 10 | 23 |
| | percent | 19.1 | 11.8 | 20.6 | 14.7 | 33.8 |

2. Please indicate whether Canadian headquarters of the foreign operation has primary responsibility in the following areas:

| | Primary responsibilities | | | | | |
|---|---|---|---|---|---|---|
| | Canadian headquarters | | | Subsidiary management | | Mixed |
| • Upstream dividend decisions (i.e., amount and timing) n = 73 | **1** | number | 70 | **2** | 3 | 0 |
| | | percent | 95.9% | | 4.1% | 0 |
| • Financing decisions for foreign operations (n = 74) | **1** | | 58 | **2** | 14 | 2 |
| | | | 78.4% | | 18.9% | 2.7% |
| • Asset-liability mix decisions for foreign operations (n = 73) | **1** | | 42 | **2** | 27 | 3 |
| | | | 57.5% | | 27.0% | 5.5% |
| • Preparation and analysis of exchange rate and exposure forecasts (n = 72) | **1** | | 64 | **2** | 5 | 3 |
| | | | 88.9% | | 6.9% | 4.2% |

**Exhibit 4 (cont.)**

3. What percentage of management in your foreign operations are local citizens?

| | | Percentage | | | | | |
|---|---|---|---|---|---|---|---|
| | | 0 | 1-25 | 26-50 | 51-75 | 76-99 | 100 |
| a. Top management | | | | | | | |
| n = 73 | | **1** | **2** | **3** | **4** | **5** | **6** |
| | number | 5 | 6 | 4 | 2 | 29 | 27 |
| | percent | 6.8 | 8.2 | 5.5 | 2.7 | 39.7 | 37.0 |
| b. Middle management | | | | | | | |
| n = 74 | | **1** | **2** | **3** | **4** | **5** | **6** |
| | number | 1 | 3 | 4 | 2 | 22 | 42 |
| | percent | 1.4 | 4.1 | 5.4 | 2.7 | 29.7 | 56.8 |

4. Please rate the importance of the following items when making a material foreign investment (e.g., expanding an existing operation, setting up a new operation, etc.).

| | | Very important | Somewhat important | Unimportant |
|---|---|---|---|---|
| • Impact of translation gains or losses (n = 75) | | **1** | **2** | **3** |
| | number | 8 | 37 | 30 |
| | percent | 10.7 | 49.3 | 40.0 |
| • Effect on overall foreign exchange exposure (n = 75) | | **1** | **2** | **3** |
| | number | 16 | 44 | 15 |
| | percent | 21.3 | 58.7 | 20.0 |
| • Impact on reported earnings (n = 74) | | **1** | **2** | **3** |
| | number | 53 | 17 | 4 |
| | percent | 71.6 | 23.0 | 5.4 |
| • Impact on cash flow (n = 75) | | **1** | **2** | **3** |
| | number | 59 | 10 | 6 |
| | percent | 78.7 | 13.3 | 8.0 |
| • Impact on dividends from subsidiary (n = 71) | | **1** | **2** | **3** |
| | number | 23 | 28 | 20 |
| | percent | 32.4 | 39.4 | 28.2 |

companies having foreign direct investment.[12] The sample represented a cross-section of companies in terms of size, industry, and

[12] The questionnaire survey was done in the summer of 1982; that is, *after* the issue of FAS No. 52 and the Canadian Exposure Draft, but before the issuance of the (revised) Canadian Section 1650.

other characteristics. Seventy-five companies responded after one follow-up for an overall response rate of 36.9 percent. The companies are listed in exhibit 5. Non-response bias was checked by comparing size (as measured by revenues and by total assets) of respondents and nonrespondents. On average, the respondent firms tended to be larger than the nonrespondents; thus, our discussion is mainly applicable to large Canadian corporations having foreign subsidiaries. The responses to the questions are given in exhibit 4, along with the distribution of the responses.

**Exhibit 5. List of Responding Companies**

| | |
|---|---|
| Alcan Aluminum Ltd. | Lawson and Jones Ltd. |
| Atco Ltd. | Loblaw Companies Ltd. |
| Bank of Montreal | MacLean-Hunter |
| Bralorne Resources Ltd. | MacMillan Bloedel Ltd. |
| Brascan Ltd. | Magna International |
| British Columbia Forest Products Ltd. | Manulife Inc. |
| B.C. Timber | Massey-Ferguson |
| Budd Canada | Robert Mitchell Inc. |
| Cadillac Fairview | The Molson Companies Ltd. |
| CAE Industries | Montreal Engineering |
| Canada Cement LaFarge Ltd. | National Sea Products |
| Canadian General Electric | Norcen |
| Canadian Manoir | NOVA |
| Canadian Occidental Petroleum | Northern Telecom |
| Canadian Pacific Ltd. | Nowsco Well Severice Ltd. |
| Carling O'Keefe | Nu-West |
| Chieftain Development | O.P.I. Ltd. |
| Cominco | Placer Development Ltd. |
| Consolidated-Bathurst | Potter Distilleries |
| Consoltex Ltd. | Premier Communications Ltd. |
| Consumers' Distributing | Ranger Oil Ltd. |
| Costain Ltd. | Reed Stenhouse |
| Culinar Inc. | Reichhold Ltd. |
| Datacrown Inc. | Rio Algom Ltd. |
| Falconbridge Ltd. | The Royal Bank of Canada Ltd. |
| FCA International | St. Lawrence Cement Inc. |
| Great Lakes Forest Products Ltd. | Sandwell and Company Ltd. |
| Hiram Walker | Scurry-Rainbow Oil |
| Hudson Bay Mining and Smelting | Seagram Company |
| Husky Oil | Selkirk Communications |
| Imperial Life | Shepherd Products Limited |
| Indal Ltd. | Simcoe Erie |
| Inter-City Gas Corporation | Spar Aerospace |
| Interprovincial Pipeline | Thomson Newspapers Inc. |
| Jannock Ltd. | Toronto-Dominion Bank |
| John Labatt Ltd. | Trimac |
| Lake Ontario Cement | Weston's |

### The Distribution of Various Independence Criteria

The questionnaire included several direct and indirect questions for management concerning the degree to which their subsidiaries were independent.

**Question 1.** "How would you rate the degree to which the foreign operation(s) is (are) independent in each of the following areas?" The results of areas presented in exhibit 4 are reported in the summary of exhibit 6. As might be expected, for the sample as a whole, certain functions are generally more "independent" than others. For example, marketing and personnel have lower mean scores (more independent) than other areas, and raising capital, capital investment, and tax planning scored high (less independent). Thus, subsidiary companies are not either independent or dependent (self-sustaining or integrated), but rather tend to exhibit varying degrees of independence in different functional areas. Further, an examination of the distribution of the scores (see exhibit 4) indicates that the marketing function exhibits an inverted U-shape, personnel is highly skewed to the "highly independent" portion of the scale, capital investment is highly skewed to the "highly dependent" end, accounting and control systems is a flat distribution, raising capital is skewed to the highly dependent end, and tax planning is an inverted U-shape. In other words, not only are the means of the various functional areas different, but so are their distributions (shapes). Depending on which functional area indicator is viewed as being most important in a certain situation, the same firm could be classified as integrated or self-sustaining.

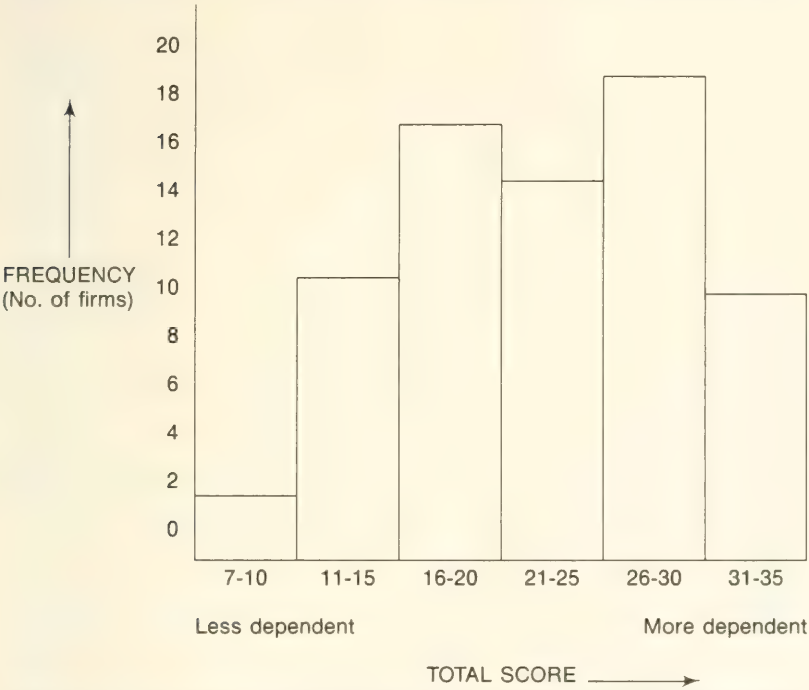
To gain an overall impression, the seven functional area scores were summed, and the results are displayed on a frequency histogram presented in exhibit 7. This exhibit indicates that if

**Exhibit 6. Independence Measures: Different Functional Areas***

| Area | n | Mean | Standard deviation |
|---|---|---|---|
| Marketing | 72 | 2.319 | 1.461 |
| Personnel | 74 | 2.500 | 1.367 |
| Capital investment | 73 | 3.904 | 1.108 |
| Accounting and control systems | 73 | 3.205 | 1.404 |
| Raising capital | 73 | 4.205 | 1.247 |
| Tax planning | 72 | 3.417 | 1.480 |
| Research and development | 74 | 3.185 | 1.520 |
| Overall** | 74 | 3.185 | 1.000 |

* The scale ranged from 1 (highly independent) to 5 (highly dependent).
** Weighted average of the above 6 indicators.

**Exhibit 7. Results of Survey Question on Independence of Foreign Operations***




* Based on data from seventy-four responding firms. Each of the functional areas was weighted equally, which might have biased the results somewhat, but the conclusion in the text still holds.

managers and others who make accounting decisions weigh each functional area equally, the overall "independence" curve based on functional areas is an inverted-U. Thus, it seems, if independence/lack of independence in various functional areas is the main criterion to be employed in classifying subsidiaries as self-sustaining or integrated, we have the worst of both worlds: different functional areas give different signals, and the overall curve is an inverted-U shape, thus making "clean" classifications difficult.

**Question 2.** "Please indicate whether Canadian headquarters or the foreign operation has primary responsibility in the following areas." In each of the four areas (see exhibit 4), Canadian headquarters usually had primary responsibility. In fact, for upstream dividend decisions and financing decisions for foreign operations, the proportion of companies in our sample for which Canadian headquarters apparently had primary responsibility was overwhelming (95.9 percent and 78.4 percent of those responding, respec-

tively). Even for asset-liability mix decisions for foreign operations, the majority (57.5 percent) were "head-office" controlled. The signals given in this question are somewhat inconsistent with some of the signals given in Question 1. Certainly, the dividend decision is a key financial policy decision, and if over 90 percent of our respondents ascribe major responsibility for this decision to Canadian headquarters, indications of independence in other functional areas (personnel, and so on) may perhaps have to be discounted.

The last part of Question 2 concerns preparation and analysis of exchange rate and exposure forecasts. It is not surprising that 88.9 percent of the respondents answering this question allocate primary responsibility to Canadian headquarters, since the foreign operation would not be particularly concerned about this aspect of management.

**Question 3.** "What percentage of management in your foreign operations are local citizens?" An indication of the degree to which a foreign operation is "independent" might reasonably be given by the proportion of top and middle management that is made up of citizens of the host country. In our survey, the majority of both management groups were local citizens; 66 of 74 respondents (84.2 percent) reported that more than 75 percent of middle management were local citizens, and 56 of 73 (73.7 percent) reported that more than 75 percent of top management were local citizens.

**Question 4.** "Please rate the importance of the following items when making a material foreign investment (for example, expanding an existing operation, starting a new operation)." The five items related to concerns that headquarters' management would have; respondents were asked to rank the importance of the particular items on a three-point scale (very important, somewhat important, and unimportant). If the respondents answered "very important," this would tend to support the belief that the subsidiary was not that independent, at least with respect to the item in question. The results were as follows: 71.6 percent of the respondents indicated that "impact on reported earnings" was "very important," and 78.7 percent indicated that "impact on cash flow" was "very important." "Effect on overall foreign exchange exposure" was viewed as being of intermediate importance, as was "impact of translation gains or losses" and "impact on dividends from subsidiary." Overall, these items tend to support the belief that the majority of Canadian companies are concerned with the

effect of subsidiary investment/operations on the parent (indeed, only 4 of 74 firms or 5.4 pecent stated that "impact on reported earnings" was "unimportant").

**The Correlation of Various Independence Criteria**

To determine whether the various indicators of independence were related (if they tended to give the same signals for any given firm), responses to Questions 1, 2, 3, and 4 were correlated. Question 1 responses along the various functional dimensions were summed and a weighted average computed (range 1-7, mean = 3.185, n = 74). For Question 2, the four indicators of the locus of primary responsibility for various decisions were summed and averaged (range 1-2, mean = 1.152, n = 75). The two management groups in Question 3 (top and middle management) were grouped (range 1-6, mean = 4.953, n = 74), and the five parts of Question 4 were also summed and weighted (range 1-3, mean = 1.749, n = 75). Bivariate Spearman correlation coefficients were computed between each pair of independence indicators; the results, along with the significance of the correlation coefficients, are shown in exhibit 8.

As indicated in the exhibit, Question 1 was significantly correlated with Questions 2 and 4 (at a 10 percent level) and was barely significantly correlated with Question 3. The coefficients in all these cases had negative signs, which is as expected since higher

**Exhibit 8. Correlations between Different Measures of Independence**

| Question | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1 | | −0.6271<br>n = 74<br>.001 | −0.1513<br>n = 72<br>.102 | −0.2249<br>n = 74<br>.027 |
| 2 | | | −0.0713<br>n = 73<br>.274 | +0.1574<br>n = 75<br>.089 |
| 3 | | | | +0.3085<br>n = 73<br>.004 |
| 4 | | | | |

(Bivariate Spearman Correlation Coefficients).
Each cell consists of correlation coefficient, number of responses, and significance.

scores on Question 1 signaled dependence, whereas higher scores on the other three questions signaled independence.

In terms of the magnitude of the correlations between Question 1 and the other questions, the Question 1–Question 2 correlation was −0.6271 (significant at a 0.001 level), which is very high indeed.

When we correlate the other questions, we find that only the Question 2–Question 3 correlation is not significant at a level of 10 percent, and further, the sign of its coefficient is unexpected. Both the Question 2–Question 4 and Question 3–Question 4 correlations are significant and have the expected sign.

From the viewpoint of the implementation of the Canadian exposure draft, it is gratifying to see the significant correlations with expected signs between different aggregate measures of independence. This offsets to some degree the apparent inconsistencies between the disaggregated measures (that is, the differences in the distributions of the functional area measured in Question 1 of exhibit 4).

Each of these questions measures a somewhat different aspect of the "independent-dependent" continuum. Question 1, on an overall aggregated basis, is concerned with the functional independence in general of the investees. Question 2 is concerned with financial/investing decisions in particular, while Question 3 focuses on the constitution of the management team. Finally, Question 4 focuses on the perceived importance of the impact of making major foreign operation changes on the parent company.

## CONCLUSIONS

We may draw the following tentative conclusions as to the implementation of the new translation requirements.

1. Because the distribution of companies on an "independence-dependence" continuum is (for certain measures, such as the aggregate functional measures in Question 2) shaped like an inverted-U, there may be disagreements between companies and their auditors. Such potential disagreement is a cost of introducing the new standard.
2. The high degree of correlation among different measures of "independence" is positive, since it means that different measures may give consistent signals for any given firm.

# *Accounting Standards and Economic Development: The Third World in Perspective*

GORDIAN A. NDUBIZU*

Little is said in the economic development literature of the impact of accounting on economic development. Apparently, development economists must have assumed that the impact of accounting on development is inconsequential or immaterial. Fortunately, a considerable body of accounting literature has explored the relationship between accounting and economic development.[1] These studies[2] have focused on the accounting needs of the Third World and how the U.S. accounting profession and government can help meet these needs. This study, unlike previous investigations, focuses on two important dimensions ignored or omitted by the previous studies. These critical dimensions include (1) the effect of developed countries' accounting standards on the economic development of the Third World, and (2) the consequences of "uncareful" intervention on the economic development of the Third World.

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[1] Herman W. Bevis, "The Accounting Function in Economic Progress," *Journal of Accountancy* (August 1958), 27-34; John M. Hunter, "Accounting and Economic Development," *Business Topics* (Spring 1964), 57-60; James J. Mahon, "Ledgers as Much as Lathes," *Columbia Journal of World Business* (Spring 1966), 83-87; George M. Scott, "Private Enterprise Accounting in Developing Nations," *International Journal of Accounting* (Fall 1968), 51-66; and Adolf J. H. Enthoven, "Accountancy for Economic Development," *Finance and Development* (September 1969), 24-29, "U.S. Accounting and the Third World," *Journal of Accountancy* (June 1983), *Accountancy Systems in the Third World Economies* (New York: North Holland, 1977), and *Accounting Education in Economic Development Management* (New York: North Holland, 1980).

[2] Enthoven, "U.S. Accounting and the Third World," *Accountancy Systems in the Third World Economies*, and *Accounting Education in Economic Development Management*.

## ACCOUNTING STANDARDS AND THIRD WORLD ECONOMY

Enthoven has noted the accounting needs of the Third World countries,[3] but his list did not consider the need to have developed countries (Britain, Canada, and the United States) consider the probable dysfunctional effect their accounting standards/regulations would have on the Third World economy prior to their issuance or enactment. This is particularly important since the accounting standards/regulation of the developed world affect or influence the operation of multinational corporations which provide a significant proportion of economic resources of the Third World.

The impact of accounting standards on the Third World is illustrated by the recent multinational accounting policies issued/proposed by the Financial Accounting Standards Board (FAS 52), the Accounting Research Committee of the Canadian Institute of Chartered Accountants (ED 1650), and the British Accounting Standards Committee (SSAP No. 20).

According to these three standards, the relationship between the holding company and the foreign subsidiary determines the functional currency of the foreign operation. The functional currency, in turn, determines the translation method and accounting policy applicable to the entity. The functional currency of a foreign operation depends on the following salient economic factors:

Functional Currency[4]

| Parent Company Currency (Integrated foreign operations) | Foreign Currency (Self-sustaining foreign operations) |
|---|---|
| (a) *Cash flows* of the foreign operation directly impact the cash flows of the reporting enterprise on a current basis and are readily available for remittance to the reporting enterprise. | *Cash flows* of the foreign operation do not have a direct impact on the cash flows of the reporting enterprise. |
| (b) *Sales prices* for the foreign operation's products are determined by worldwide competition or by international prices, and are primarily responsive on a short-term basis to changes in exchange rates. | *Sales prices* for the foreign operation's products are determined more by local competition or local government regulations than by worldwide competition and international prices; such sales prices are not primarily responsive on a short-term basis to changes in exchange rates. |

[3] Enthoven, "U.S. Accounting and the Third World."

[4] See Financial Accounting Standard No. 52, paragraphs 39-46 and CICA, Exposure Draft (June 1982), paragraphs 92-94 (Appendix A).

| Parent Company Currency (Integrated foreign operations) | Foreign Currency (Self-sustaining foreign operations) |
|---|---|
| (c) The *sales market* for the products of the foreign operation is dependent on the market for the products of the reporting enterprise. | The *sales market* for the products of the foreign operation is independent of the market for the products of the reporting enterprise. |
| (d) *Labor, material, and other costs* for the foreign operation's products or services, on a continuing basis, are primarily costs for components obtained from the reporting enterprise or its associated companies. | *Labor, material, and other costs* for the foreign operation's products or services are not, on a continuing basis, primarily reimbursements of costs of the reporting enterprise or its associated companies. |
| (e) *Financing* is primarily from the reporting enterprises. Funds generated by the foreign entity's activities are not sufficient to service existing and normally expected debt obligations without the infusion of additional funds from the parent company. | *Funds generated* by the foreign operation are sufficient to service existing and normally expected debt obligations (both local and foreign) without the infusion of additional funds by the reporting enterprise. Financing arrangements would normally be made by local management (this would not necessarily be negated by a policy of the reporting enterprise to centralize financing arrangements for all operations in the group). |
| (f) *Intercompany transactions* are a dominant part of the foreign operations. | *Intercompany transactions* are not a dominant part of the foreign operation. |

Foreign subsidiaries which are totally financed by the holding company are considered mere extensions of holding company operations. The functional currencies of these subsidiaries are the same as those of holding companies. Based on the developed countries' accounting standards (ED 1650, SSAP 20, FAS 52, and so on) the temporal method should be used in translating these subsidiaries' financial statements. This method of translation (temporal) includes in the periodic income the translation adjustment. The inclusion of translation adjustment (exchange gain) in income increases the volatility of reported earning, which has adverse security market reaction.[5]

On the other hand, foreign subsidiaries/operations financed through local borrowing or sources are considered "self-sustaining operations." The functional currency of these foreign operations is the foreign currency (local currency) which differs from the holding company currency. The newly issued/proposed standards

[5] William Strong, *Wall Street Journal* (8 December 1976); and Lawrence A. Rose, *Business Week* (26 January 1976), 49.

(ED 1650, SSAP No. 2, and FAS 52) require that financial statements of self-sustaining foreign operations be translated at the current exchange rate and translation adjustment be excluded from the determination of the net income. The exclusion of translation adjustment from net income has the opposite effect of the inclusion of translation gains/losses; that is, less volatile income and less adverse market reaction. This is consistent with the studies which show a mechanistic relationship between reported accounting earnings and stock prices. An early assertion of such a relationship was proposed by MacNeal.[6] Some recent accounting expositions also reveal a similar mechanistic assumption.[7]

The analysis discussed clearly indicates that the multinational accounting standards[8] issued/proposed by the Financial Accounting Standards Board (FASB), Accounting Research Committee of the Canadian Institute of Chartered Accountants (CICA), and the British Accounting Standards Committee encourage multinational companies to finance their foreign operations through local borrowing. Since local borrowing is needed (other things being equal) to justify use of current rate method of translation and the exclusion of translation adjustment from net income, the adverse economic consequences of volatile corporate income caused by inclusion of translation gains/losses are eliminated.

Therefore, the developed countries' accounting standards (foreign currency standards) discourage foreign investments in the Third World. This contention is based on the following facts.

**Higher Exchange Risk in the Third World**

The exchange risk of various countries of the Third World was empirically measured. The countries studied consist of fifty-two developing countries and fourteen developed industrialized countries (see exhibit 1). The breakdown of countries under various world zones is consistent with World Bank classification.[9]

The exchange rate for these countries between 1970 to 1981 was extracted from the International Financial Statistics. The exchange rate used was the average annual rate, chosen because of its low relative volatility (compared with monthly or daily rates), which makes it a better predictor of future exchange rates. The

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[6] K. MacNeal, *Truth in Accounting*, reprint (Lawrence, Kansas: Scholars Book Company, 1970).

[7] A. J. Briloff, *Unaccountable Accounting* (New York: Harper & Row, 1972).

[8] Refers to foreign currency standards, e.g., CICA Exposure Draft 1650 and SSAP No. 20.

[9] *World Bank, World Tables*, 2nd ed. (Baltimore: Johns Hopkins University Press, 1980).

**Exhibit 1. Sample**

| Nature of development | World zone | Number of countries studied | Total number of countries studied |
|---|---|---|---|
| Developing | Africa | 13 | 13 |
| Developing | Asia and Pacific | 10 | 23 |
| Developing | Latin America and Caribbean | 9 | 32 |
| Developing | Southern Europe | 8 | 40 |
| Developing | Middle East and N. Africa | 9 | 49 |
| Developing | Oil Exporting | 3 | 52 |
| Developed | Industrialized | 14 | 66 |

period 1970 to 1981 was chosen because of its uniqueness in the history of exchange rate. The fixed exchange system was displaced in 1973 by the floating system. The exchange risk during the fixed exchange system is given, whereas the exchange risk in the floating period remains unknown. This study measures the exchange risk of various countries by examining the degree of volatility in exchange rate. The degree of volatility is measured by the standard deviation, which is a unitless measure of variability from the mean.

The results of the study indicate that developing countries on the average have more exchange risk than do the developed industrialized countries. Among the Third World, Latin American and Caribbean countries have the highest exchange risk.

In Africa, the Francophile countries have higher exchange risk than the Anglophile countries.[10] The overall exchange risk for Africa is 11.69, while Francophile countries have an average exchange risk of 37.0 as opposed to 3.62 observed among Anglophile countries. Previous studies on the differences between the exchange systems of Anglophile and Francophile African countries show that purchasing power parity holds more among Anglophile than Francophile countries.[11]

Exhibits 2 and 3 show the exchange risk of various countries of the world, and they indicate that on the average, the Third World has a higher exchange risk than the developed world. This finding is used to demonstrate that the accounting standard of the developed countries has a measurable dysfunctional effect on economic development of the Third World.

[10] Francophile=Former French African colonies. Anglophile=Former British African colonies.

[11] Gordian Ndubizu, "Exchange Rate and Inflation."

**Exhibit 2. World Exchange Risk Zones**

| Exchange risk zones | Total standard deviation | Mean standard deviation | Sample size | Nature of economic development |
|---|---|---|---|---|
| Latin America and Caribbean | 1,729.347 | 192.149 | 9 | D |
| Francophile African countries | 148.077 | 37.019 | 4 | D |
| Southern European countries | 257.905 | 32.238 | 8 | D |
| Asia and Pacific | 214.742 | 21.474 | 10 | D |
| Industrialized countries | 233.288 | 16.66 | 14 | A |
| Industrialized countries excluding Japan and Italy | 16.039 | 1.33 | 12 | A |
| Middle Eastern countries | 6.181 | 0.687 | 9 | D |
| Capital surplus oil exporting | 0.958 | 0.319 | 3 | D |

D = developing; A = developed industrialized. The classification of countries into developing and developed industrialized is based on World Bank, *World Tables*, 2nd. ed. (Baltimore: Johns Hopkins University Press, 1980).

**Exhibit 3. Twenty Countries with Most Exchange Risk**

| Countries | Standard deviation | Rank | Developed and developing |
|---|---|---|---|
| Argentina | 1,301.175 | 20 | D* |
| Chile | 252.609 | 19 | D |
| Spain | 197.759 | 18 | D |
| Italy | 167.372 | 17 | A |
| Peru | 126.812 | 16 | D |
| Korea | 103.911 | 15 | D |
| Indonesia | 99.854 | 14 | D |
| Gabon | 74.004 | 13 | D |
| Japan | 49.877 | 12 | A |
| Turkey | 31.135 | 11 | D |
| Brazil | 26.516 | 10 | D |
| Benin | 24.691 | 9 | D |
| Cameroon | 24.691 | 8 | D |
| Ivory Coast | 24.691 | 7 | D |
| Portugal | 12.303 | 6 | D |
| Columbia | 11.445 | 5 | D |
| Greece | 7.500 | 4 | D |
| Belgium | 6.656 | 3 | A* |
| Mexico | 5.340 | 2 | D |
| Sri Lanka | 4.999 | 1 | D |

* Classification of countries into (D) developing and (A) developed industrialized is based on World Bank, *World Tables*, 2nd. ed. (Baltimore: Johns Hopkins Press, 1980).

**The First Example**

The view that developed countries' accounting standards discourage foreign investment in the Third World is illustrated by an exhibit which indicates that a subsidiary in the Third World which raises capital from the local market has less volatile income than the subsidiary financed directly from the parent company. The exhibit compares two identical subsidiaries (A and B) owned by two identical multinationals and operated in Brazil. The only difference between the subsidiaries is that A is financed totally by the holding company while B borrows funds from the Brazilian market; that is, the functional currency of Subsidiary A is the U.S. dollar (the holding company's currency), while the functional currency of Subsidiary B is the Brazilian currency (cruzeiro). The exchange rate at the beginning of the accounting period (January 1981) was one Brazilian currency to one dollar (BC = $1) until December 31, 1981, at which time the foreign currency depreciated to one Brazilian currency to eight-tenths of a dollar (BC = $0.80). The subsidiaries' financial statements are translated into the holding company currency (dollars) as indicated in exhibits 4 and 5.

Since Subsidiary A's investment in Brazil is financed totally by the holding company, the temporal method of translation is used (see exhibit 4). This translation method includes the $100 translation adjustment (loss) in the determination of holding company consolidated net income. The fluctuation in exchange rate has direct and significant impact on the magnitude and volatility of

**Exhibit 4. First Example—Multinational A, Subsidiary A (Temporal method of translation)**

| | Balance sheet 12/31/81 (In Brazilian currency=BC) | Balance sheet (In translated U.S.=dollars) |
|---|---|---|
| Inventory | BC 900 | $ 720 |
| Marketable security | 200 | 160 |
| Cash/current receivables | 600 | 480 |
| Noncurrent receivables | 200 | 160 |
| Plant and equipment | 500 | 500 |
| Current liabilities | (900) | (720) |
| Noncurrent liabilities | (500) | (400) |
| Equity | BC 1,000 | $ 900 |
| Translation adjustment Gain (Loss) (Included in income) | | ($ 100) |

**Exhibit 5. First Example — Multinational B, Subsidiary B (Current rate method of translation)**

| | Balance sheet 12/31/81 (In Brazilian currency=BC) | Balance sheet (In translated U.S. dollars) |
|---|---|---|
| Inventory | BC 900 | $ 720 |
| Marketable security | 200 | 160 |
| Cash/current receivables | 600 | 480 |
| Noncurrent receivables | 200 | 160 |
| Plant and equipment | 500 | 400 |
| Current liabilities | (900) | (720) |
| Noncurrent liabilities | (500) | (400) |
| Equity | BC 1,000 | $ 900 |
| Translation adjustment Gain (Loss) (Excluded from income) | | ($ 200) |

translation adjustment. Therefore, the inclusion of volatile translation adjustment in income creates volatile consolidated net income. This fluctuation affects market expectation and riskiness of the consolidated entity. To overcome or avoid these problems, the multinational corporation may borrow from the Brazilian market. This borrowing changes the functional currency of the subsidiary from dollars to cruzeiros. The advantage of such change is illustrated by the case of Subsidiary B in exhibit 5. Subsidiary B uses the current rate translation method simply because it raises capital from Brazil. This method excludes the $200 translation adjustment from consolidated earnings. Consequently, the market expectation and riskiness of Multinational B are unaffected by the translation method. Therefore, multinational corporations borrowing funds from the Third World market are not penalized by the advanced countries' accounting standard; rather, the standard encourages such borrowing. On the other hand, direct foreign investments in the Third World are discouraged by the standards.

#### The Second Example

Exhibits 5 and 6 show that Latin American and Caribbean countries have the highest exchange risk. The second example demonstrates that Latin American and Caribbean countries were more adversely affected by the developed countries' accounting standard. The example, in addition to information in the first example, assumes that the Brazilian exchange rate in December 31, 1981, was BC

**Exhibit 6. Second Example**

| Method of translation | | Temporal | Current |
|---|---|---|---|
| | Balance sheet 12/31/81 (In Brazilian currency), same for each subsidiary | Subsidiary A balance sheet (In translated U.S. dollars) | Subsidiary B balance sheet (In translated U.S. dollars) |
| Inventory | BC 900 | $ 450 | $ 450 |
| Marketable security | 200 | 100 | 100 |
| Cash/current receivables | 600 | 300 | 300 |
| Noncurrent receivables | 200 | 100 | 100 |
| Plant and equipment | 500 | 500* | 250* |
| Current liabilities | (900) | (450) | (450) |
| Noncurrent liabilities | (500) | (250) | (250) |
| Equity | BC 1,000 | $ 750 | $ 500 |
| Translation adjustment Gain (Loss) | | ($ 250) | ($ 500) |

* Indicates variation in two translation methods.

= $0.50. This assumption is crucial in demonstrating the impact of "advanced accounting standard"[12] on high exchange risk zones. The results of the analysis of the second example indicate that Subsidiaries A and B have higher translation adjustment (loss) than reported in the first example. This suggests that subsidiaries in higher exchange risk environments have higher volatile income, risk, and market reaction. Therefore, direct foreign investments by the advanced countries' accounting standards are discouraged more in the Latin American and Caribbean countries than in any other Third World country (see exhibits 4, 5, and 6).

### Foreign Investment and Growth Rate

The orthodox paradigm of economic development has long advocated the use of growth rate (per capita) as the number one measure of development.[13] Studies with orthodox orientations argue that a positive relationship exists between economic growth and magnitude of foreign investment in the Third World. Thus, Ulmer observed that Third World countries that were most successful in attracting foreign investment have the highest economic

[12] FAS 52, SSAP No. 20, CICA Exposure Draft 1650.

[13] Charles K. Wilber and Kenneth P. Jameson, "Paradigms of Economic Development and Beyond," in *Directions in Economic Development*, ed. Kenneth P. Jameson and Charles K. Wilber (Notre Dame, Ind.: University of Notre Dame Press, 1979), 1-41.

growth.[14] Countries such as Singapore, Hong Kong, and Greece, which have received more per capita foreign direct investment than most others, have also achieved higher relative increases in per capita income.

Therefore, accounting standards that increase or encourage multinational investments in the Third World would enhance their per capita income. The improved per capita income may in turn attract additional investment, since multinational corporations invest more in well-to-do developing markets.[15]

Conversely, accounting standards that discourage foreign investment would decrease per capita income in the Third World. Thus, FAS 52, SSAP No. 20, and CICA Exposure Draft 1650 would have a devastating effect on per capita income and standard of living in the Third World. The contentions that the Latin American and Caribbean basin is primarily affected by the developed countries' accounting standard is consistent with the Inter-American Development Bank Report.[16] The development bank reported that in 1982 there was no overall economic growth in Latin America. The per capita income for the region fell in the same year. Although the advanced countries' accounting standard is argued to discourage foreign investments, it should not be blamed for the entire economic ills of the Third World.

## PROBLEMS OF CARELSSS INTERVENTION ON THE ECONOMIC DEVELOPMENT OF THE THIRD WORLD

This section argues that a careless intervention into the Third World economy by developed countries' accounting professions and governments would have adverse economic ramifications on development. Careful intervention involves clear analysis and understanding of the cultural environment of the Third World and elimination of actions that coil or twist the sovereignty of the Third World.

### Cultural Environment

Culture is the cognitive[17] frame of reference that links the political, social, legal, economic, and technological environments. Thus, an understanding of the culture of the Third World helps explain

[14] Melville Ulmer, "Multinational Corporations and Third World Capitalism," *Journal of Economic Issues* (14 January 1980), 453-71.

[15] G. Bashirova, "'The Rich Get Richer, the Poor Poorer' Three Myths about the Multinationals," *New Temes* (Moscow) (April 1980), 24, 25.

[16] Clyde H. Farnsworth, "Setback for Latin Economies," *New York Times* (22 August 1983), D1 and D6.

[17] E. Beres and J. Portwood, "Explaining Cultural Differences in the Perceived Role of Work: A Cross-Cultural Study" in *Organizational Functioning in a Cross-Cultural Perspective*, ed. S. W. England, A. R. Negandi, and B. Wilpert (1979).

how its political, social, legal, economic, and technological environments are connected. To understand the connection requires that the various aspects of the environments be reviewed.

Therefore, careful intervention in the Third World by advanced countries' accounting associations and governments requires a complete study of the various aspects of the environment and the culture which unifies these elements. The studies of macro-organizational characteristics reveal that most political and business organizations in West Africa are highly formalized (very bureaucratic).[18] These organizations inherited an accounting system based on the stewardship or accountability concept from their colonial masters. It seems perfectly correct that a bureaucratic organization would have a "bureaucratic" (stewardship) accounting system. Further studies of West African culture and organizations have, however, revealed that particularism is a common phenomenon.[19] These studies also note the pervasive importance of tribal loyalties and extended family obligations which have adversely affected the ability of employees (auditor, accountant, doctors, and so on) to perform their roles in accordance with the bureaucratic norm of strict impartiality (universalism). The notion of accountability as elucidated by the FASB and Ijiri may not be practicable in an environment where particularism is a common phenomenon.[20] The Third World probably needs an accountability theory that best reflects its business and cultural environments.

**Convoluted Sovereignty**

Enthoven has noted the manner in which the United States helped two developing countries with certain accounting problems.[21] In both instances, the Third World country made the initial request for help. Unsolicited intervention by the United States or other

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[18] R. Ajay, M. Latib, and G. Ndubizu, "Cross-Cultural Differences in Organizations: The Case of West Africa" (Working Paper No. 10, 1983).

[19] Colin Baker, "Bureaucratic Growth in Africa: Causes, Consequences and Control," *IFE Essays in Administration*, ed. C. Baker and M. J. Balogun (Ibadan: University of IFE Press, 1975); R. L. Harris, "The Role of Higher Public Servants in Nigeria: As Perceived by the Western-Educated Elite," in *Studies in Nigerian Administration*, ed. D. J. Murray (Letchworth, England: Garden City Press, 1970); Robert M. Price, *Society and Bureaucracy in Contemporary Ghana* (Berkeley: University of California Press, 1975); and E. Date-Beh, "Supervision in a Ghanian Garment Factory," *Ghana Journal of Sociology*, vol. 8 and 9 (1974 and 1975), 16-23.

[20] FASB — Notion of Accountability. See *AICPA Report of the Study Group on the Objectives of Financial Statements* (October 1973), 25. See also Yuji Ijiri, *Theory of Accounting Measurement*, Studies in Accounting Research No. 10 (American Accounting Association, 1975), 86.

[21] Enthoven, "U.S. Accounting and the Third World," *Journal of Accountancy* ( June 1985).

advanced countries may create a hostile and distrustful relationship between the two countries. The newly independent Third World countries highly value their sovereign status. Any infringement on the "highly valued assets" (sovereignty) becomes a source of considerable concern to the leaders of such countries. In addition, installation of sophisticated accounting systems will not be to the best interest of the corrupt leaders in the Third World. Naturally, these leaders would oppose any unsolicited intervention under the pretense of safeguarding their sovereign status.

The World Bank, the United Nations, the International Monetary Fund, the International Federation of Accountants, and the International Accounting Standards Board are potential catalysts for accounting aid to the Third World.

## CONCLUSION

The foreign currency standards issued by Britain, Canada, and the United States have adverse effects on the economic development of the Third World. These standards discourage multinational corporations from investing economic resources in the developing regions, especially in Latin American and Caribbean countries. The Latin American and Caribbean basin has the highest exchange risk in the world. This situation severely penalizes multinationals which financed all their operations in Latin and Caribbean countries. (See the Appendix.)

Careless and unsolicited intervention in the Third World accounting system may cause more problems than the current level of development in these countries can deal with. Careful intervention requires thorough understanding of the social, cultural, political, economic, and technological environments of those countries.

## APPENDIX

**Ranking of Industrialized Countries According to Exchange Risk (1970-1981)**

| Rank \ Exchange risk | Standard deviation | Rank according to exchange risk | Mean standard deviation | Mean* standard deviation |
|---|---|---|---|---|
| Italy | 167.372 | 14 | 16.66 | |
| Japan | 49.877 | 13 | 16.66 | |
| Belgium | 6.656 | 12 | 16.66 | 1.337 |
| Austria | 4.295 | 11 | 16.66 | 1.337 |
| Switzerland | 1.070 | 10 | 16.66 | 1.337 |
| Denmark | 0.768 | 9 | 16.66 | 1.337 |
| Norway | 0.758 | 8 | 16.66 | 1.337 |
| Germany | 0.603 | 7 | 16.66 | 1.337 |
| United Kingdom | 0.537 | 6 | 16.66 | 1.337 |
| France | 0.487 | 5 | 16.66 | 1.337 |
| Sweden | 0.356 | 4 | 16.66 | 1.337 |
| Ireland | 0.307 | 3 | 16.66 | 1.337 |
| Australia | 0.118 | 2 | 16.66 | 1.337 |
| Canada | 0.084 | 1 | 16.66 | 1.337 |
| Ranking scale | 14 Most risky | - - - - - - - - - - | - - - - - - - - - - | 1 Least risky |

* Excluding Italy and Japan.

**Ranking of Latin American and Caribbean Countries According to Exchange Risk (1970-1981)**

| Countries \ Exchange risk | Exchange rate standard deviation | Rank according to exchange risk | Mean standard deviation | |
|---|---|---|---|---|
| Argentina | 1.301.175 | 9 | 192.150 | |
| Chile | 252.609 | 8 | 192.150 | |
| Peru | 126.812 | 7 | 192.150 | |
| Brazil | 26.516 | 6 | 192.150 | |
| Colombia | 11.445 | 5 | 192.150 | |
| Mexico | 5.340 | 4 | 192.150 | |
| Costa Rica | 4.126 | 3 | 192.150 | |
| Nicaragua | 1.263 | 2 | 192.150 | |
| Venezuela | 0.061 | 1 | 192.150 | |
| Ranking scale | 9 Most risky | - - - - - - - - | - - - - - - - - | 1 Least risky |

**Ranking of African Countries According to Exchange Risk (1970-1981)**

| Exchange risk / Countries | Exchange rate standard deviation | Rank according to exchange risk | Francophile* mean standard deviation | Anglophile* mean standard deviation | Overall mean standard deviation |
|---|---|---|---|---|---|
| Gabon | 74.004 | 13 | 37.019 | | 11.669 |
| Benin | 24.691 | 12 | 37.019 | | 11.669 |
| Cameroon | 24.691 | 12 | 37.019 | | 11.669 |
| Ivory Coast | 24.691 | 12 | 37.019 | | 11.669 |
| Zaire | 1.218 | 9 | | 0.402 | 11.669 |
| Kenya | 0.637 | 8 | | 0.402 | 11.669 |
| Tanzania | 0.561 | 7 | | 0.402 | 11.669 |
| Sudan | 0.371 | 6 | | 0.402 | 11.669 |
| Ghana | 0.238 | 5 | | 0.402 | 11.669 |
| Malawi | 0.183 | 4 | | 0.402 | 11.669 |
| Ethiopia | 0.168 | 3 | | 0.402 | 11.669 |
| South Africa | 0.126 | 2 | | 0.402 | 11.669 |
| Nigeria | 0.115 | 1 | | 0.402 | 11.669 |
| Ranking scale | 13 Most risky | - - - - - - - - | - - - - - - - - | - - - - - - - - | 1 Least risky |

* Francophile refers to French-speaking African nations (French colonies).
Anglophile refers to English-speaking African nations (British colonies).

**Ranking of Middle Eastern and North African Countries According to Exchange Risk (1970-1981)**

| Exchange risk / Countries | Exchange rate standard deviation | Rank according to exchange risk | Mean-standard deviation |
|---|---|---|---|
| Iran | 3.792 | 9 | 0.687 |
| Lebanon | 0.536 | 8 | 0.687 |
| Egypt | 0.482 | 7 | 0.687 |
| Morocco | 0.441 | 6 | 0.687 |
| Algeria | 0.378 | 5 | 0.687 |
| Iraq | 0.232 | 4 | 0.687 |
| Jordan | 0.193 | 3 | 0.687 |
| Syria | 0.083 | 2 | 0.687 |
| Tunisia | 0.044 | 1 | 0.687 |
| Ranking scale | 9 Most risky | - - - - - - - - - - | 1 Least risky |

**Ranking of Asian and Pacific Countries According to Exchange Risk (1970-1981)**

| Countries \ Exchange risk | Exchange rate standard deviation | Rank according to exchange risk | Mean standard deviation |
|---|---|---|---|
| Korea | 103.911 | 10 | 21.474 |
| Indonesia | 99.854 | 9 | 21.474 |
| Sri Lanka | 4.999 | 8 | 21.474 |
| Pakistan | 1.989 | 7 | 21.474 |
| Afghanistan | 1.871 | 6 | 21.474 |
| Philippines | 0.577 | 5 | 21.474 |
| India | 0.495 | 4 | 21.474 |
| Thailand | 0.414 | 3 | 21.474 |
| Singapore | 0.327 | 2 | 21.474 |
| Malaysia | 0.305 | 1 | 21.474 |
| Ranking scale | 10 Most risky | - - - - - - - - - - - - - - - - - - - - | 1 Least risky |

**Ranking of Southern European Countries According to Exchange Risk (1970-1981)**

| Countries \ Exchange risk | Exchange rate standard deviation | Rank according to exchange risk | Mean standard deviation |
|---|---|---|---|
| Spain | 197.759 | 8 | 32.238 |
| Turkey | 31.135 | 7 | 32.238 |
| Portugal | 12.303 | 6 | 32.238 |
| Greece | 7.500 | 5 | 32.238 |
| Yugoslavia | 5.952 | 4 | 32.238 |
| Israel | 2.906 | 3 | 32.238 |
| Cyprus | 0.183 | 2 | 32.238 |
| Malta | 0.167 | 1 | 32.238 |
| Ranking scale | 8 Most risky | - - - - - - - - - - - - - - - - - - - - | 1 Least risky |

## ADDITIONAL REFERENCES

Accounting Standards Committee. *Statements of Standard Accounting Practice No 20.* London: ASC, 1983.

Briston, Richard J. "The Evolution of Accounting in Developing Countries." *International Journal of Accounting* (Fall 1978), 105-20.

Canadian Institute of Chartered Accountants Accounting Research Committee. *Exposure Draft (Foreign Currency) 1650.* Toronto, Ontario: CICA, 1982.

Ezejelue, A. C. "The Developing Profession in Nigeria." *Accountant* (15 January 1976), 71-73.

Financial Accounting Standards Board. *Statement of Financial Accounting Standards, No. 8.* Stamford, Conn.: FASB, 1975.

———. *Statement of Financial Accounting Standards No. 52.* Stamford, Conn.: FASB, 1981.

Ghartey, Ato. "A New Perspective for Accountancy Education in Ghana." *International Journal of Accounting* (Fall 1978).

Perera, M.H.B. "Accounting and Its Environment in Sri Lanka." *Abacus* (June 1975), 86-96.

Quereshi, Mahmood A. "Private Enterprise Accounting and Economic Development in Pakistan." *International Journal of Accounting* (Spring 1974), 125-41.

Radebaugh, Lee H. "Environmental Factors Influencing the Development of Accounting Objectives, Standards, and Practices in Peru." *International Journal of Accounting* (Fall 1975), 39-56.

Seiler, Robert E. "Accounting, Information Systems, and Underdeveloped Nations." *Accounting Review* (October 1966), 652-56.

Singhvi, Surendra. "India's Feeble Financial Statements." *Columbia Journal of World Business* (November-December 1967), 55-60.

Weaver, James H., Kenneth P. Jameson, and Richard N. Blue. "Growth and Equity: Can They Be Happy Together?" *International Development Review,* 20, 1 (1978), 20-27.

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[1] William A. Dymsza, Multinational Business Strategy (New York: McGraw-Hill, 1972), 49-53.
[2] Geoffrey Holmes, "Replacement Value Accounting," Accountancy (March 1972), 4-8.

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American Institute of Certified Public Accountants. Accounting Research Bulletin No. 43. New York: AICPA, 1953.

______. "Financial Statements Restated for General Price Level Changes." Statement of the Accounting Principles Board No. 3. New York: AICPA, 1969.

Leonard Lorensen and Paul Rosenfield. "Management Information and Foreign Inflation." Journal of Accountancy, December 1974, pp. 98-102.

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# *Contents*

# *The Use of Foreign Financial Statements for Risk Analysis: An Empirical Test (Korea)*

SOONG PARK*

Comparability of accounting data among countries has become a subject of interest due to the rapid increase in joint projects involving companies from different countries and the efforts of foreign corporations to raise capital in U.S. capital markets.

Nair grouped countries according to the officially pronounced accounting standards for measurement rules and disclosure requirements, and he asserted that comparisons of financial statements among countries in different groups should not be made.[1] Choi et al. conducted a study[2] comparing financial ratios of Japanese and Korean companies to those of American companies. That study found significant differences in the financial ratio measures, which it attributed to accounting practices, as well as to the different economic climates and social structures. In both studies, the authors concentrated on the data reported in the financial statements, rather than on the information contained in them.

To find differences between the financial statements of companies operating under different socioeconomic environments is not surprising, especially since these statements are prepared under different measurement rules and disclosure requirements. It is not just that the amounts are different; the real question is whether these various financial statements contain the same kind of infor-

* Soong Park is Associate Professor of Management at Rutgers, the State University of New Jersey.

[1] R. D. Nair, "Empirical Guidelines for Comparing International Accounting Data," *Journal of International Business Studies* (Winter 1982), 85-98.

[2] Frederick D. S. Choi et al., "Analyzing Foreign Financial Statements: The Use and Misuse of International Ratio Analysis," *Journal of International Business Studies* (Spring/Summer 1983), 113-31.

mation on financial position and profitability of operations. If they do, we can ask, "Do specific ratios and report items represent the same characteristics as they do in the United States?" And an even more fundamental question is "Can we use the knowledge gained through empirical research in financial statement analyses in the United States to analyze financial statements of other countries?"

This paper hopes to provide empirical evidence in the use of accounting data for risk analysis in Korea and to compare the results to the findings in the United States. This assessment of default risk on loans to corporations both before and after the loan decisions is a common practice. For non-banking users of the statements, the default risk information can be useful for evaluating potential partners in joint ventures or in licensing agreements in Korea. In this paper, the use of financial accounting data to predict corporate failure serves as an important example of the importance of such financial accounting data.

The empirical study performed with Korean data is presented in the next section. The findings are compared to those of U.S. studies. Finally, implications of the findings for use of foreign (Korean) financial statements are drawn.

## THE KOREAN STUDY

During the past two decades, Korea has experienced a steady and rapid growth under the guidance of government economic planners and policy makers. Although the business actions were taken by private management enterprise, government officials were important in influencing them. The role of commercial banks was to act merely as providers of funds after allocation decisions had already been reached by the government. The emphasis on export markets, international competitiveness, and controllability of the economy naturally led to resource allocation decisions favorable for a few very large Korean companies. Therefore, the decisions on large loans to major corporations were based more on political and policy goals rather than on the borrowers' financial statement information and the perceived risk of default. The role of accounting information to aid in efficient allocation or resources in the marketplace was largely ignored as being purely academic and as having little practical substance. The Korean banks had no real authority or responsibility to make major loan decisions. Interestingly, loans to smaller Korean companies were generally not available unless they were well secured by some collateral.

During the past two years, the Korean government has liberalized

banking practices. The government has sold virtually all of its holdings in commercial banks. Not completely independent of these activities, the major banks began to explore ways to evaluate the creditworthiness of their corporate customers.[3] Those studies were exclusively on very large companies whose success and failure depended to some extent on direct political decisions of the government rather than solely on financial factors or general economic conditions. Nevertheless, the banks believed that they would be held responsible for bad debt losses in the future. They sought ways to improve their loan-granting decisions and the subsequent monitoring practices.

This study is based on the experience of small companies which, individually, would not have sufficient political power to generate favorable loan intervention action by the government. The data were obtained from the Korea Loan and Guaranty Fund, Korea's Small Business Administration loan program. In 1976, the government established a fund, Korea Loan Guaranty Fund (referred to here as the Fund), to assist small businesses in their effort to obtain bank loans, at an interest rate up to 20 percent per annum lower than the curb-market rates (14 to 35 percent annual interest rate). The Fund does not make loans directly to businesses but guarantees (for a nominal fee of 1 percent of the loan amount per annum) the repayment of loans made by commercial banks.

The Fund differs from usual commercial banks in three respects. First, it guarantees loans only to companies whose ability to provide collateral to obtain secured loans has been exhausted. Thus, the Fund's guaranty must be based on an assessment of the company's future cash generation ability through profitable operations. Second, most of the companies are small businesses managed by the owners rather than by professional managers. The small size of the companies reduces the possibility of external forces influencing the loan decisions and future outcomes. Also, the accounting information of the small companies tends to be less reliable than reports of the large companies whose financial statements are examined by independent auditors. Third, the objective of the Fund is not solely to minimize the losses due to defaulted loans. The Fund's very existence is to make funds available to the companies whose ability to raise funds through regular channels has already been exhausted. The Fund must balance the request to support the promising companies in need of funds against the danger of investing unwisely. In other words, the Fund must be

[3] Korea Development Bank, *Corporate Failure Prediction Model* (1982).

able to encourage the economy while minimizing the cost (of bad loans).

By the end of 1981, the outstanding balance of the guaranteed loans totaled $2 billion for 18,640 companies. The annual amount of losses to the Fund due to defaulted loans reached $150 million. The default rate has been rising steadily since 1980.

This trend was a cause for alarm to managers of the Fund, as well as among government officials, since the government has final responsibility for resource requirements of the Fund. Therefore, a study was performed to help improve the loan guaranty decisions. That study is the basis for the analysis of the information content of financial ratios in Korea reported in this paper.[4]

## SAMPLE AND DATA

Initially, a random sample of 150 problem cases from the past three years was selected. Two hundred fifty-eight normal cases were selected at random from the active file to serve as the control group. Requests for the data were made to the field offices by the home office. Non-response and the insufficient data reduced the usable cases to 42 problem cases and 154 normal cases.[5] Several cross tabulations were made to test for sample representativeness, and no profound differences between the sample and the population were found except for the large proportion of problem cases in the sample due to the stratified sampling procedure. Each of the problem cases was matched in the control group based on the industry (see Exhibit 1).

Financial records and other credit evaluation information on the companies were collected for three years, 1979-1981. As noted earlier, the subject companies were small businesses, and the reliability of their accounting records was questionable. Therefore, the information was obtained from their tax returns.[6] While the tax return information may be biased, it was assumed that the

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[4] Soong Park and Chung Jee, *Study of Loan Guarantee Decisions at Korea Loan Guarantee Fund,* Academy of Small Businesses, 1982.

[5] An unusually large number of the problem cases were processed based on recommendations of governmental units. Governmental decision to support a particular industry would preempt any decision by the Fund. Accordingly, the records of those cases did not include sufficient financial data for analysis. Exclusion of these cases does not limit the scope of the study since they are out of the Fund's jurisdiction in reality.

[6] The Fund itself uses the tax return information. In many cases, the companies did not have an adequate enough accounting system to produce even the basic financial statements.

**Exhibit 1. Industry Distribution of Sample Firms**

| Group Industry | Default (Experiment) | Normal (Control) |
|---|---|---|
| Manufacturing | 32 | 32 |
| Construction | 4 | 4 |
| Retailing | 3 | 3 |
| Trucking | 2 | 2 |
| Others | 1 | 1 |
| Total | 42 | 42 |

information tends to understate assets and income, rather than overstate,[7] thus giving a more conservative picture of the company's creditworthiness. The fact that the tax return data are subject to some scrutiny by the Revenue Department was the main reason the Fund decided to use the tax data.

This study suffers from the following inherent shortcomings of the sample and data. The sample was selected from the population of companies which were granted credits initially. The population did not include the companies whose application for a guaranty was denied. Thus, the sample selected can provide information only for type II errors (erroneous decision to guaranty) but not for type I errors (erroneous decision to deny).[8] Another limitation is that the quality of accounting data falls short of that of large corporations or of U.S. corporations. The data are the best available, however, and the real decision makers at the Fund use them for the actual loan guaranty decisions.[9] Therefore, while the internal quality of the data can be questioned, the external validity of the data used in this study is considered accurate. The ultimate test is whether a better set of data existed and was available. In this case. we are confident that the best available data were used in the study.

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[7] There were isolated cases where the company reported higher income and paid additional taxes to obtain the benefits of the Fund's guaranty and the lower interest rate. It was not a prevalent phenomena, however, and the overall validity of the data was assumed to be unaffected by those cases.

[8] This limitation is not unique to this study. Any study of loan portfolio would contain this limitation. See Richard Dietrich and Robert Kaplan, "Empirical Analysis of the Commercial Loan Classification Decision," *Accounting Review* (1982), 18-36.

[9] While the poor quality of data does not affect the validity of the study as to the loan guaranty decisions, it does diminish the comparative analyses of financial ratios between the countries.

## ANALYSIS OF DATA

Initially, financial ratios identified as being important in previous studies were computed for each of the eighty-four cases for two years.

An indicator variable (y) was used to classify the cases into normal (0) and problem (1) cases. A stepwise regression was made with this indicator variable as the dependent measure, and the financial ratios of two years before as the independent variables. The result is presented in Exhibit 2.

With all of the fifteen variables in the equation, the $R^2$ was approximately .331. A more meaningful measure than the $R^2$ measure in this case would be the ability to identify correctly the problem cases. Using the results of the regression run, thirty-one normal cases and thirty-two problem cases were correctly classified, while eleven normal and ten problem cases were incorrectly classified, yielding sixty-three cases or 75 percent of correct specification. That is, while an arbitrary classification would have yielded 50 percent correct specification, on the average, the use of financial ratios yielded 75 percent or one-half of the remaining half correctly. Exhibit 2 also shows that six ratios accounted for most of the explanatory power of the equation. Liquidity of the asset holdings and the current assets relative to sales revenue accounted for five of the six, while one ratio was the quick ratio.

**Exhibit 2. Multiple Regression Using Financial Ratios**

| Step | Variables | b | $R^2$ | $\Delta R^2$ | r |
|---|---|---|---|---|---|
| 1 | Current assets/total assets | .1289 | .052 | .052 | .2289 |
| 2 | Net working capital/sales | −.6078 | .124 | .071 | −.1203 |
| 3 | Quick assets/current liabilities | .3179 | .184 | .064 | .1223 |
| 4 | Accounts receivable/sales | −.3708 | .260 | .076 | −.1201 |
| 5 | Current assets/sales | .5465 | .274 | .014 | −.0245 |
| 6 | Quick assets/sales | −.4147 | .294 | .020 | −.0653 |
| 7 | Quick assets/total assets | .5025 | .302 | .008 | .2141 |
| 8 | Current assets/current liabilities | −.1212 | .210 | .008 | .1038 |
| 9 | Cash/sales | −2037 | .313 | .003 | −.1581 |
| 10 | Net working capital/current liability | .4253 | .316 | .003 | −.0122 |
| 11 | Cash/total assets | −.2449 | .322 | .006 | .0314 |
| 12 | Net income/total assets | −.1452 | .326 | .004 | −.0024 |
| 13 | Total debt/total assets | −.0905 | .330 | .004 | −.0807 |
| 14 | Net working capital/total assets | .0782 | .331 | .001 | .1165 |
| 15 | Cash flow/total debt | .0409 | .331 | .000 | .0009 |
| | Constant | .2758 | | | |

These can all be considered to reflect the firms' ability to satisfy the fund requirement of current operating cycle rather than direct profitability measures incorporating net income and/or cash flow amounts.[10]

Another regression run using the "one year before" data was made. Surprisingly, the prediction power and the $R^2$ were substantially less than those of the case two years earlier. $R^2$ dropped to .15, and the classification accuracy dropped to 69.5 percent. There can be several reasons for this unexpected result, each having different implications on the value of this study. The first and the worst case would be where the quality of the financial data is so poor that they cannot be relied upon. In this case, a study of this nature or, for that matter, any analysis of financial statements in Korea is an exercise in futility. Second, it could be that the management became aware of worsening financial conditions and the need for additional loans. Management then adopted certain accounting principles to make the financial conditions look better. Third, the management may have taken certain steps, other than accounting, to cause the financial statements to appear better, such as certain off balance-sheet events.[11] If the second and/or third reason is valid, credit analysts should take care to utilize data that are somewhat immune to management manipulations. Therefore, a regression run was made with additional non-financial variables in the equation. The result was somewhat better ($R^2$ = .395), with market share, industry competitiveness, and capacity utilization rate being included as significant variables. The classification was 80 percent correct in the sample.[12]

Finally, based on the results of the regression runs, significant financial and other variables were selected. Then, two discriminant functions were developed: one with financial ratios only and another with other information included. The results of the

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[10] This finding, however, could be due to the fact that the firms in the population all had large debts, at least more than they can put up collaterals for and obtain secured loans. Therefore, this finding may simply suggest that when all the firms are highly debt financed, their short-term survival ability is important in assessing the long-term profitability.

[11] While it is very important to determine the cause of this phenomenon, it is a major project by itself. In this study, the possibility of complete data inadequacy is assumed away.

[12] When the changes in the financial ratios were included (in effect two years of ratio data), the $R^2$ improved to .418, and the classification accuracy increased to 83.2 percent. However, the differences were considered insignificant.

discriminant analysis are quite similar to those of the regression runs (see Exhibit 3).

The variables found to be most significant were market share and sales growth rate data among the non-financial ratio data and current asset/sales, net working capital/total assets and quick assets/sales among the financial ratios. Therefore, the direct indicator of default in Korean small business was determined to be the inability to meet short-term financial needs rather than long-term profitability or soundness of the operations.[13]

To examine the validity of this finding, another study was examined. The author is not aware of any other study that dealt with small businesses in Korea. Only one of several existing studies of large companies has been made public.[14] The study was based on twenty-four failed firms and twenty-four healthy firms matched for industry, sales, and total asset size. Discriminant functions were developed based on twenty-one financial ratios.

**Exhibit 3. Summary of Regression and MDA Analyses**

| | Regression | | | MDA | | |
|---|---|---|---|---|---|---|
| | Actual | Prediction | | Actual | Prediction | |
| Data | | Good | Bad | | Good | Bad |
| 1 Year Financial | Good | 26 | 16 | Good | 29 | 13 |
| | Bad | 10 | 32 | Bad | 12 | 30 |
| | Total | (69.05%) | | | (70.24%) | |
| 2 Years Financial | Good | 31 | 11 | Good | 33 | 9 |
| | Bad | 10 | 32 | Bad | 14 | 28 |
| | Total | (75%) | | | (72.62%) | |
| 1 Year Financial & Others | Good | 32 | 10 | Good | 34 | 8 |
| | Bad | 7 | 35 | Bad | 7 | 35 |
| | Total | (79.76%) | | | (82.14%) | |

Key variables selected:
Financial: Current assets/sales
Net working capital/total assets
Cash/total assets
Quick assets/sales
Nonfinancial: Market share
Sales growth
Years in business

[13] An example would be where a sound small business subcontracts with a large corporation and finances the production with short-term loans and possibly at a very high curb market rate, and experiences a long delay of several months in collection of the receivable from the large corporation. Consequently, the small business would default on the loan it sued to finance the production.
[14] Korea Development Bank, *Corporate Failure Prediction Model*

The discriminatory power of the models was 68.75 percent for three years ahead, 85.42 percent two years ahead, and 93.75 percent for one year–ahead predictions of the failures. The key variables for each of the three models are presented in Exhibit 4.

Concentrating on the two years–ahead model, we can compare the results of the Korea Development Bank (KDB) study with ours. The non-financial data were not included in the KDB study, therefore, only the financial ratios can be compared.[7] Among the key variables in the KDB study, we find the income/total assets and the rate of increase in profit. The major difference is that while our study selected mostly balance sheet information, the KDB study selected all income statement–based ratios except for one ratio. The result could lie in the design of the study, initial selection of variables, or in the nature of the sample firms, small versus large. It also could be due to the differences in quality of data. Since the information for the large companies was audited

**Exhibit 4. Discriminant Analysis by Korea Development Bank**

| Years prior to failure | Variables | Actual | Prediction | |
|---|---|---|---|---|
| | | | Good | Bad |
| | | Good | 18 | 6 |
| 3 Years | 11, 8, 7, 5 | Bad | 9 | 15 |
| | | Total | (68.75%) | |
| | | Good | 21 | 3 |
| 2 Years | 5, 4, 6, 3, 1, 2, 7, 8, 12 | Bad | 4 | 20 |
| | | Total | (85.42%) | |
| | | Good | 24 | 0 |
| 1 Year | 2, 9, 10, 7, 6, 1, 12 | Bad | 3 | 21 |
| | | Total | (93.75%) | |

Variables:
1 Owner's equity/total assets
2 Total assets/total debt
3 Net income/sales
4 Gross profit/sales
5 Operating income/total assets
6 Ordinary income/sales
7 Total revenue/total expenses
8 Total debt/interest expense
9 Sales/total assets
10 Sales/fixed assets
11 Sales/inventory
12 Increase in ordinary income/ordinary income

[7] Since the experimental and control firms were matched on industry and sales, the market share data would have been a controlled variable.

by independent auditors, they should be more reliable than the unaudited ones of the small companies. This may explain the large difference in the classification ability between the two and one year(s) before models. The fact that balance sheet data are easier to verify than the flow data in the income statement may have contributed to the small business study selection of balance sheet ratios. Given accurate information, income statement data might be more useful than balance sheet data, but the "better" quality of balance sheet data may more than compensate for the difference in information content. In any event, if the tax return information was the best financial information available for small companies at reasonable cost, and since it is the data used by the Fund, which could ask for almost any information, we should develop means to use the information. Next, we briefly compare these two studies with those of the U.S.–based studies.

## COMPARISON WITH THE U.S. FINDINGS

The purpose of this section is to present a highly condensed summary of the results of U.S.–based studies and to compare the findings with those of the Korean studies.

The credit evaluation studies in the United States can be classified into (1) prediction or failure and (2) bond-rating studies. Prediction of failure studies aims to provide a scoring model which will classify the firms into either the survival or the failure class, and the soundness of the model is determined by the accuracy of the classification and how far in advance the classification can be made. Bond rating studies attempt to determine the ratings that will be provided by the bond rating agencies. The major differences between the two types of studies is that the failure studies are attempting to predict a state of nature, while the rating studies are attempting to model the decisions made by experts, which may or may not be entirely correct. Exhibit 5 presents the variables most commonly cited as being significant in various studies.

Understandably, the bond rating studies tend to emphasize the ratios related to debt coverage and interest payments while the failure studies concern themselves more with the profitability of the firms. The results of the failure studies are more directly applicable to our study.

Most of the published studies in the United States are based on large companies. Since we found differences between the large and small companies, we believed it important to determine whether the differences are due to the design differences of the study (study

**Exhibit 5. Comparison of Significant Variables by Company Size and Country**

| | KOREAN | U.S. |
|---|---|---|
| SMALL | Current assets/sales<br>Net Working Capital/Total Assets<br>Cash/Total Assets<br>Quick Assets/Sales<br><br>Market Share<br>Sales Growth Rate<br>Years in Business | ALVEZ: NET PROFIT ON SALES<br>NET PROFIT ON NET-WORTH<br>CURD/NETWORTH<br>CURD/INVEN<br>CURRATIO<br>QUICK RATIO<br>EBT/NETWORTH<br>EBT/TOTA<br><br>Product line experience<br>Diversification |
| LARGE | KOREAN DEVELOPMENT BANK<br><br>2 yrs — OPERATING INCOME/TOTA<br>GROSS PROFIT/SALES<br>ORRDINARY INC SALES<br>NETINC/SALES<br>OWNER'S EQUITY/TOT. ASSET<br>TOTA/TOTD<br>TOTR TOTEXP<br>INC. IN ORDINARY INCOME/ORD. INCOME | DEAKIN: CURA/TOTA<br>TOTD/TOTA<br>CURA/SALES<br>WORKING CAP/SALES |

specific), or due to differences in size (general). An unpublished study on small business failures by Alvez[10] was examined to compare with the studies based on large companies.

Comparing the results with those of the Korean studies, we find that the variables selected in the U.S. studies and the KDB studies were rather different. For the failure studies, the net income total assets is the only common ratio. The interest coverage ratio used in bond rating studies was also used in the KDB study. Compared with the Korean small business study, we find current assets to sales as common ratios. Casual observation of Exhibit 5 does not reveal any glaring differences between the Korean and U.S. small businesses or between small and larger businesses in the United States. A plausible inference is that the Korean large businesses operate in a different political economic environment from others, at least in obtaining funds. This type of comparison, however, is

[10] Jeffrey Ross Alvez, "The Prediction of Small Business Failure Utilizing Financial and Non-Financial Data" (Ph.D. dissertation, University of Massachusetts, 1978).

too subjective and study specific to be acceptable as evidence. To provide more objective evidence, replications of studies using the Korean data were conducted.

## REPLICATIONS

To evaluate the compatibility between the U.S. and Korean financial statements and between the small and large companies, the default prediction models developed in other studies were applied to the Korean small business data. Since we were interested in the information content of the financial data rather than the direct applicability of the models, the variables identified in various studies were used as discriminant factors, and the factor coefficients were recalculated based on the Korean data. Replications were repeated to determine the stability of the findings. The accuracy of two year–ahead predictions of various sets is reported in Exhibit 6.

The results indicate that the predictive accuracy varies somewhat from sample to sample. We find the variables from U.S. studies performed slightly better than did the KDB studies. This is somewhat surprising since the differences were expected to stem from the different economic structure and accounting practices. The large size effect, difference between Korean large and small companies, may indicate the impact of government intervention in financing activities of large companies in Korea.

The result indicates that some differences exist between the Korean small businesses and other groups. The variables selected for discriminant models and their significance are not consistent across the board. Availability and quality of data somewhat limit the generalizability of the results, but we wish to argue that sufficient evidence has been provided to call attention to the fact that the information content and comparability in decision setting are the real issues rather than standardization of the financial statement numbers.

## COMPARABILITY OF THE FINANCIAL STATEMENT INFORMATION

In this paper, we attempted to evaluate the information content of the financial statement data between the United States and Korea. It was known that the two countries have different accounting disclosure standards and measurement rules, and that equity structures and financing strategies are somewhat different. The specific aim of this study was to determine whether the financial statements of Korean firms can be evaluated in a manner similar to that of U.S. firms. This question would remain even if

**Exhibit 6. Discriminant Analyses of Korean Small Business Loan Defaults Using Various Financial Ratios**

| | U.S. — Small | U.S. — Large | Korea — Large | |
|---|---|---|---|---|
| All 185 cases | 65.41% CURRATIO NWC/TOTA C. DEBT/ NETWORTH TOT DEBT/ NETW | 65.41% NWC/SALES TOTD/TOTA CURA/CURL NWC/TOTA | 54.05% NETW/TOTA SALES/TOTA SALES/FXTASSET | 185 cases 2 years data |
| 84 cases First Set | 61.90% CUR. A/CUR. L TOTD/TOTA NWC/TOTA CURD/INVEN | 60.71% NWC/SALES TOTD/TOTA NWC/TOTA CURA/CURL | 67.86% NETW/TOTA | 84 cases Matched Random |
| Second set | 73.81% CURRATIO NWC/TOTA NETW/TOTA | 70.24% CURA/TOTA NWC/SALES NWC/TOTA CURA/CURL | 66.67% NETW/TOTA | First Set |
| Third set | 67.86% NETW/TOTA | 71.43% NWC/SALES CURA/SALES NWC/TOTA CURA/CURL | 59.14% TOTD/INTEREST EXP (.13) | 2nd Set |
| Fourth Set | 63.10% CURRATIO CURD/INVEN | 60.71% QUICKAST/SALES CURA/CURL | 57.14% NO SIGNIF. VAR. | 3rd Set |
| | | 90% | 85.42% | accuracy in the original data |

the statements of a Korean company were adjusted to meet the U.S. generally accepted accounting principles, since the underlying economic factors are not likely to be similar to the conditions in the United States. Therefore, the question is an empirical one and has significance for evaluating and using Korean financial accounting data.

The results of this study indicate that significant differences exist in the information portrayed by financial accounting ratios between small and large companies in Korea. Although detailed examinations were not made, differences seem to exist between large companies in Korea and the United States as well.

As for the decision of evaluating a potential partner in Korea, especially a small business, some adjustments need to be made.

The companies' market position within the Korean market (i.e., market share) should be evaluated. Since Korea is a relatively small market, compared to that of the United States, a number of strong competitors in the marketplace can make the investment in the smaller companies risky. If the U.S. company is willing to support the Korean company's short-term financial needs, however, a substantial portion of the risk can be eliminated. Heavier emphasis should be placed on the financial data pertaining to and prepared before the negotiations began. Some circumstantial evidence exists that firms can take actions to cause the financial ratios to be temporarily more favorable without improving the real conditions. This can be accomplished through (cosmetic) accounting changes and/or off-statement financing activities in addition to outright falsifications. Therefore, more reliance should be placed on the data that are not likely to have been manipulated and can be verified by direct observations. The tax return information obtained before the loan discussions began is less likely to have been subject to manipulation. Balance sheet data can be verified by independent auditors through physical inspection and confirmation with the external data sources such as banks and customers.

Returning to the original purpose of this paper, we conclude that the use of Korean accounting data should include appropriate adjustments for differences in accounting and economic structures. Reliability of accounting data cannot be taken for granted in using Korean data, in addition to measurement and disclosure difference. Not only are the debt-equity structures of the U.S. and Korean companies different, the key factors for survival seem to be somewhat different. In Korea, short-term liquidity seems to be a very important characteristic of a healthy firm.

## SELECTED REFERENCES

Beaver, William H. "Financial Ratios as Predictors of Failure." Empirical Research in Accounting, Selected Studies 1966, Supplement to *Journal of Accounting Research*, 71-128.

Benishay, Haskel. "Discussion of a Prediction of Failure Using Accounting Data." Empirical Research in Accounting, Supplement to 1973 *Journal of Accounting Research*, 180-87.

Backer, Morton, and Martin L. Gosman. "The Use of Financial Ratios in Credit Downgrade Decisions." *Financial Management* (Spring 1980), 53-56.

Deakin, Edward B. "A Discriminant Analysis of Predictors of Business Failure." *Journal of Accounting Research* (Spring 1972), 167-79.

Edmister, Robert O. "Financial Ratios as Discriminant Predictors of Small Business Failure." Ph.D. dissertation, The Ohio State University, 1970.

Kaplan, Robert S., and Gabriel Urwitz. "Statistical Models of Bond Ratings: A Methodological Inquiry." *Journal of Business*, *52*, 2(1979), 231-61.

Libby, Robert. "Accounting Ratios and the Prediction of Failure: Some Behavioral Evidence." *Journal of Accounting Research* (Spring 1975), 150-61.

Ohlson, James A. "Financial Ratios and the Probabilistic Prediction of Bankruptcy." *Journal of Accounting Research* (Spring 1980), 109-31.

Wilcox, Jarrod W. "A Prediction of Business Failure Using Accounting Data." Empirical Research in Accounting, Supplement to 1973 *Journal of Accounting Research*, 163-79.

# *Cultural Constraints on Audit Independence in Japan*

JILL McKINNON*

The purpose of this paper is to examine the contemporary operation of the corporate audit function in Japan from the perspective of audit independence. Audit independence has been described as a mental attitude of integrity and honesty, controlled and supported by institutions, through entry-level requirements for auditors, professional accounting and auditing standards and codes of professional ethics, and by society through judicial review and individuals exercising their rights in law.[1] The author argues that intrinsic acceptance of independence in professional relationships and its support through the exercise of social controls flow more freely in Western cultures, premised on independent and individually oriented social relationships, than in Japan, where social relationships are premised on interdependence and group orientation.

## INTRODUCTION OF INDEPENDENT AUDIT

The concept of independent audit was introduced in Japan during its occupation by Allied, primarily U.S., forces from 1946 to 1952. As part of their policies for the "promotion of democratic forces" in Japan[2] and the improvement of corporate financial reporting

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[1] Larry P. Bailey, *Contemporary Auditing* (New York: Harper & Row, 1979).

[2] U.S. Department of State, *Occupation of Japan — Policy and Progress*, Publication 2671, Far Eastern Series 17 (Washington, D.C., 1946).

and disclosure,[3] the occupation forces enacted and supervised the Securities Exchange Law of Japan in 1947 and the Certified Public Accountants Law in 1948, and the establishment of the Japanese Institute of Certified Public Accountants in 1949.

The Securities Exchange Law, modeled closely on the U.S. Securities Act of 1933 and Securities Exchange Law of 1934,[4] introduced the requirement for the professional (certified public accountant, CPA) audit of corporations subject to the law.[5] Prior to the Securities Exchange Law, Japanese corporations were subject only to the audit provisions of the Commercial Code. These required that corporate financial statements be audited by a statutory auditor. Although having extensive legal powers, the statutory auditor was not required to be a CPA and could be an employee of the audited corporation.

The Certified Public Accountants Law, which was enacted following the repeal of the Registered Public Accountants Law of 1927, specified the requirements for CPA qualification and the duties and responsibilities of practicing CPAs. The primary aim of the law was "to elevate the academic and technical standards of public accountants then practicing under the title of *keirishi*."[6] Prior to the repeal of the Registered Public Accountants Law, the requirements for qualification contained no formal examinations and accorded registration to university, college, or higher professional school graduates who had taken a course in accounting.[7] The Certified Public Accountants Law required newly qualified CPAs to organize a single nationwide institute of public accountants.[8] In 1949, the Japanese Institute of Certified Public Accountants (JICPA) was established, with voluntary membership provisions.

Through the introduction of a legal requirement of professional (CPA) audit, more stringent qualification requirements, rights, and duties for CPAs, and the establishment of a national body of

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[3] Supreme Commander for the Allied Powers, *Instructions for the Preparation of Financial Statements of Manufacturing and Trading Companies* (Tokyo: General Headquarters, Supreme Commander for the Allied Powers, 1947), 188.

[4] Japan Securities Research Institute, *Securities Markets in Japan* (Tokyo: Tokyo Shoken Kaikan, 1980), 183.

[5] Corporations whose shares are publicly held, primarily stock exchange-listed corporations. See Securities Exchange Law (1947), article 193.

[6] Registered public accountant. See Gen Murase, "The Present Status of the Public Accounting Profession in Japan," *Accounting Review* (1962), 89.

[7] Gen Murase, "Accounting in Japan and the New Japanese CPA Law," *Journal of Accountancy* (April 1950), 334.

[8] Certified Public Accountants Law (1948), article 43.

professional accountants to represent CPAs, the Allied forces introduced a framework for independent audit similar to that of the United States at that time. Underlying the introduction of independent audit was the implicit assumption that a system similar to that of the United States would operate in a similar fashion to the U.S. system. The incidents of fraudulent bankruptcy which occurred in Japan in the early 1960s demonstrated, however, that the existence of a legal requirement for an independent CPA audit was not sufficient to ensure its operation as independent audit.

**Incidents of Fraudulent Bankruptcy**

In early 1965, *Sanyo Tokushuseiko Kabushiki Kaisha* (Sanyo Special Steel Company) declared insolvency.

> Investigation revealed that the company had created fictitious earnings since 1959 for a total of about Yen 7 billion, paid dividends of 10-12% out of overstated profits, and remunerated management more than three times as much as indicated in the financial statements. The independent auditor (CPA) of the company, a retired official of the National Tax Bureau, knowingly reported these fictitious statements as "present fairly."[9]

At approximately the same time, more than ten listed, medium-sized corporations also declared bankruptcy in Japan, with subsequent investigations revealing that almost all had manipulated their financial statements.[10] The characteristics of these cases were neither exceptional nor uncommon in Japan at the time. For several years before the Sanyo Special Steel case, professional accountants and academics had been aware of numerous unreported cases of financial statement manipulation that had eventually resulted in corporate bankruptcy.[11]

As a listed company, Sanyo Special Steel was subject to a dual set of audit requirements: those of the Commercial Code, which applied to all Japanese corporations, and those of the Securities Exchange Law, which applied additionally to corporations with publicly held shares. The audit provisions of the Commercial Code required that corporate financial statements prepared under the code and circulated to shareholders be audited by a statutory auditor whose duty was to report to the general meeting of shareholders on the documents of account distributed at the

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[9] Robert J. Ballon, Iwao Tomita, and Hajime Usami, *Financial Reporting in Japan* (Tokyo: Kodansha International, 1976), 163.

[10] Kimiyoshi Ohno, Hideo Ichikawa, and Atsuyoshi Kodama, "Recent Changes in Accounting Standards in Japan," *International Journal of Accounting* (Fall 1975), 110.

[11] Seigo Nakajima, "Economic Growth and Corporate Financial Reporting in Japan," *International Journal of Accounting* (Fall 1973), 35.

meeting by corporate directors.[12] The powers of the statutory auditor included a general power to inspect the corporate books of account and financial records, to make extracts from them and to call on the corporate directors for a report concerning the accounts where such a report was considered necessary to perform the audit, and to investigate the company's affairs and the state of its property.[13]

The audit provisions of the Securities Exchange Law required that corporate financial statements prepared in accordance with Securities Exchange Law and filed with the Ministry of Finance[14] be audited by a professional (CPA) auditor.[15] In performing their audit, CPAs were bound by the Ordinance on Auditing issued by the Ministry of Finance in 1956 and the Auditing Standards and Working Rules issued by the ministry's advisory body, the Business Accounting Deliberation Council. Under this law and ordinance (and the Certified Public Accountants Law), the professional auditor was duty bound to disclose incidents of *funshoku kessan* (financial statement "window-dressing") revealed by the audit.

Investigation of Sanyo Special Steel Company and of other cases of corporate bankruptcy at the time determined that the statutory auditors failed to reveal the decline of the corporation's financial position. Also, the professional auditors had failed to bring to the attention of the Ministry of Finance, through their audit reports, the instances and numerous methods of "window-dressing" that corporate directors had employed to disguise profit performance and financial position.[16]

The statutory and professional auditors had both the legal power and duty to reveal "accounting manipulation" and had been aware of fraudulent accounting practices for several years.[17] The reason for their continued failure to do so may be explained by evaluating the concept of independence in audit against the cultural determinants of auditor/corporation interrelationships in Japan at the time.

[12] Commercial Code (1899), article 275.
[13] Ibid., article 274.
[14] These statements were originally filed with the Securities Exchange Commission in Japan, established by the Allied forces in 1947, and designed to function in a fashion similar to the U.S. Securities and Exchange Commission. Immediately following the occupation, the Securities Exchange Commission was abolished by the Diet and its functions ascribed to the Ministry of Finance.
[15] Securities Exchange Law, article 193-2.
[16] Interview with officers of Corporation Finance Division, Securities Bureau, Ministry of Finance, January 19, 1982.
[17] Ballon, Tomita, and Usami, *Financial Reporting,* 178.

**CULTURAL DETERMINANTS OF INDEPENDENT RELATIONSHIPS**

Acceptance of the concept of independence in professional relationships generally flows more freely from Western than from Japanese cultural perspectives on interpersonal and intergroup relationships. Japanese social relationships are generally accepted as based on interdependence and group orientation, rather than independence and individual orientation. The concepts of interdependence and group orientation derive from Nakane's vertically structured group model of Japanese society[18] based on contrasting cultural orientations of "attribute" (the personal characteristics of an individual) and "frame" (the location of an individual in terms of other individuals and institutions). Nakane suggests that Westerners are typically attribute oriented and tend to perceive themselves as individuals possessing certain attributes and skills (such as an accountant, engineer, or computer programmer), while the Japanese tend to view themselves in the context of an associational frame typically related to organizational or group affiliations (a Sumitomo Metals man or a Ministry of Finance man, for example).[19]

Differential perceptions of attribute and frame result in certain contrasts between Western and Japanese corporate associations. For example, the orientation to the individual and his skills in Western societies is reflected in the tendency toward job and group mobility through an individual's readiness to sell his or her skills to the highest bidder. The orientation to the group in Japanese society is reflected in the individual's acceptance of a permanent association with a specific organization or group and the concept of lifetime employment.[20]

An individual's self-perception in terms of frame rather than attribute determines the nature of interpersonal and intergroup relationships in Japan. Other individuals are perceived as interrelated and located along a continuum based on subjective distance from the individual's frame. Nakane refers to this form of perception as *renzoku no shiko* (the continuum mentality).[21] She contrasts it with the bilateral conflict perception of Western societies, where individuals perceive themselves as independent and separate, and

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[18] Chie Nakane, *Japanese Society* (London: Weidenfeld and Nicolson, 1970); and *Criteria for Adjustment: The Japanese Continuum Mentality* (Tokyo: Kodansha Shinsho, 1972).

[19] Nakane, *Japanese Society*, 1-3.

[20] Edwin O. Reischauer, *The Japanese* (Tokyo: Charles E. Tuttle, 1977), 132.

[21] Alan G. Rix, "An Analysis of Japanese Responses to Foreign Society: A Critique of Nakane's Work on Japanese Mentality and Social Structure," Australia-Japan Economic Relations Research Project, Australian National University, 1975, 5.

groups as separate from individuals. The continuum mentality precludes such discontinuities between individuals and groups since an individual relates to all other individuals through the common factor of subjective distance from the individual's frame.

Interdependence and its behavioral manifestations stem from the concept of *amae,* which reflects the individual's psychological dependence on the group for authority, approval, and security and the corresponding obligations and group-centered standards of behavior.[22] The codes of conduct and standards of behavior observed in interdependent relationships are based on implicit and mutual loyalty and trust,[23] guided by social values including *nai nai ni sumaseru* (the internal settlement of disputes) and *tasuke-ai* (mutual help and the protection of mutual interests),[24] and serve to facilitate and maintain harmony in interdependent relationships. The Japanese seek to preserve harmony in their decisional processes through an acceptance of compromise and an emphasis on participation, consultation, and a readiness to extend the decision-making process to incorporate the genuine reconciliation of competing interests.[25]

The Japanese attitude toward contracts exemplifies the effect of interdependence on individual and group (organizational) relationships. This helps explain the low level of litigation among corporations and legal personalities in Japan.[26] In Western nations, the terms of contracts are binding and legally enforceable in a court of law with recourse to judicial review and settlement a frequent outcome of breaches of contracts. In Japan, honoring agreements is also very important; however, the concept of and approach to honoring a contractual agreement differs from those in Western nations. For example, if, due to unforeseen circumstances, the performance becomes particularly onerous for one party, the contract will typically be renegotiated between the parties in light of the new circumstances.[27]

Ballon suggests that the Japanese view a contract in terms of the interdependent relationships between the performers, rather

[22] Teruo Doi, *The Anatomy of Dependence* (Tokyo: Kodansha International, 1973).
[23] Richard T. Pascale and Anthony G. Athos, *The Art of Japanese Management* (Middlesex, England: Penguin Books, 1981), 127.
[24] Ballon, *Financial Reporting,* 159.
[25] For a discussion of harmony, see Pascale and Athos, *Japanese Management,* 110-13.
[26] Reischauer, *The Japanese,* 267.
[27] P. H. N. Opas, "What Happens When the Contract Becomes Unprofitable," *Business Law Review* (March 1973), 62.

than in terms of the legal aspects of performance.[28] In respect to corporations, this is consistent with the more general interdependencies existing among parties in Japan, reflected in the typical establishment of long-term raw materials, marketing, and labor relationships. The relationships reflected in a specific contract between corporations are viewed as part of an on-going relationship between the parties which will involve further contracts in the future.

In contrast with Western societies, Japanese social relationships are based on group consciousness (*dantai ishiki*) rather than individual orientation, on interdependence rather than independence, and on the maintenance of harmony in interpersonal and intergroup relationships rather than on confrontation and recourse to public manifestation and third-party settlement of disputation. Understanding the cultural determinants of societal philosophy and behavior is a prerequisite to explaining the apparent failure of statutory and professional auditors to reveal instances of fraudulent manipulation of financial statements typified by the Sanyo Special Steel incident. These determinants formed the basis of relationships between auditors and corporations and served to preclude the effective performance of independent audits in Japan at the time.

**Auditor/Corporation Relationships**

Prior to the passage of the Securities Exchange Law in 1947, Japanese corporations had been subject to audit only by a statutory auditor, who was typically not a qualified accountant and frequently an employee of the company itself. The relationship between the statutory auditor and the corporation was typically, therefore, one of interdependence between employee and corporate management. The relationship was consequently influenced by expected behavioral relationships including mutual loyalty, the protection of mutual interests, and the internal settlement of disputes. Interdependence, rather than independence, determined both the corporate directors' perception of the statutory auditor and the auditors' reluctance to make public the incidents of "accounting manipulation" occurring within the corporation. This relationship was dictated not essentially by pecuniary considerations but by more fundamental cultural determinants of group interdependencies.

The perception of interdependent auditor/corporation relation-

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[28] Robert J. Ballon, "A Lesson from Japan: Contract, Control and Authority," *Journal of Contemporary Business* (1979).

ships in Japan was extended by corporate directors to professional auditors, as well as statutory auditors. Despite the introduction of independent (CPA) audit under Article 193-2 of the Securities Exchange Law, corporate directors continued to regard the professional auditor as an "employee" of the company, expecting the auditor to protect the interests of management and group affiliates, rather than the interests of the investing public. Ballon notes that, in many cases, the professional auditor had private connections with directors of the company or was a former employee.[29]

The lack of acceptance of independent relationships between corporate managers and professional auditors was consistent also with the propensity of Japanese corporations to restrict trust to insiders (employees and group affiliates) rather than corporate outsiders. The traditional and contemporary tendency of Japanese corporations is not to use outsiders in corporate-related activities but to rely on and develop the expertise of people within the corporations.[30] The introduction of the CPA profession was, therefore, "something Japanese companies felt they did not require."[31] An independent audit was seen as a legal requirement of no benefit to the corporation and was rejected as a concept by corporate directors.

Additionally, professional auditors could not, at this time, invoke professional association representation and status to force an acceptance of the independent audit. At this stage in the development of corporate reporting in Japan, JICPA had not emerged as the strong and cohesive body envisaged by the Allied forces. In 1965, of the 3,800 CPAs in Japan, only one-third of them was engaged in auditing. The remainder were largely involved in taxation services for smaller corporations. Nor was there any legal provision in Japan for groups of CPAs to operate under a single registered name. Thus, the situation developed that individual CPAs, with at the most ten assistant CPAs and clerical assistants, conducted the audits of Japan's rapidly expanding industrial giants such as Mitsui, Mitsubishi, and Sumitomo.[32] Consequently, faced with the negative attitude of corporate directors toward independent audit and lacking professional status and peer support, individual CPAs found it extremely difficult to maintain independence and integrity in their interactions with the large and powerful corporations.

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[29] Ballon, *Financial Reporting,* 177.

[30] Interview with Etsuo Sawa and Tetsuo Takeyama, partners, Coopers & Lybrand, Tokyo, January 18, 1982.

[31] Ibid.

[32] Ballon, *Financial Reporting,* 169-70.

Just as cultural determinants, reflected in auditor/corporation relationships, served to prevent the reporting of accounting manipulation by auditors prior to the Sanyo Special Steel insolvency in 1965, those same determinants contributed to the intensity of public and government reaction to the fraudulent bankruptcies. By contrast with the numerous unreported incidents of accounting manipulation prior to 1965, Sanyo Special Steel was the first case of fraudulent bankruptcy to receive wide publicity. Nakajima notes that the term "accounting manipulation" had not previously appeared in the major Japanese newspapers and that the Sanyo Special Steel bankruptcy was used by the press in a coordinated campaign directed against improper corporate financial reporting.[33] This campaign accorded overt recognition by the government and the Japanese people of a situation which had existed in the audit of corporate financial statements for a number of years.

The public outcry following publicity of the fraudulent nature of the Sanyo Special Steel case may be regarded as a stimulus for change of greater potential intensity in Japan, where group relationships are based on interdependence, rather than in Western nations, where such relationships are based on independence. The premise of psychological dependence (*amae*) assumes implicit and mutual trust in interdependent relationships. Dore transposes this to interdependent corporate relationships as a belief "in original virtue rather than in original sin,"[34] which, when viewed in conjunction with the Japanese emphasis on the people constituting the corporation rather than the corporation as a legal or separate entity,[35] provides greater significance and intensity to violations of trust, because such violations cannot be lessened or depersonalized by recourse to the veil of the corporate entity.

The extent of interdependence provides a further reason for the increased intensity of public reaction to the Sanyo Special Steel bankruptcy. Interdependence among corporations based on long-term materials and market interrelationships and between corporations and employees through lifetime employment is far reaching across both corporations and time. Consequently, the effects of violation of interdependent relationships are also far reaching. They are perceived as occasioning not only losses by investors in the failed corporation but also social upheaval for employees in

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[33] Nakajima, "Economic Growth," 36.

[34] Ronald Dore, *British Factory — Japanese Factory. The Origins of National Diversity in Industrial Relations* London: George Allen & Unwin, 1973), 238.

[35] Ballon, *Financial Reporting,* 158.

the corporation itself and related corporations, which, in a society of lower job mobility than in Western nations, are more adversely affected by loss of employment.

### RESPONSES TO INCIDENTS OF FRAUDULENT BANKRUPTCY: LEGISLATIVE AND ADMINISTRATIVE REFORMS

The Japanese corporate bankruptcies also reflected adversely on the Ministries of Finance and Justice, the main authorities responsible for the administration of audit requirements under the Securities Exchange Law and the Commercial Code. The importance of securities markets and the potential of fraudulent bankruptcies to prejudice those markets were recognized by both ministries,[36] which prepared responses designed to strengthen the operationalization of the audit function.

#### Ministry of Finance

Prior to the Sanyo Special Steel case, filing periodic reports with the Ministry of Finance under Securities Exchange Law had been a routine process.[37] Ministry officials gave little attention to the content of the reports. Since the audit practitioners lacked the strength either to enforce compliance with the Securities Exchange Law or to qualify reports for noncompliance, the corporations had become accustomed to "windowdressing" their financial statements with relative impunity. Following Sanyo Special Steel, the ministry acted to (1) strengthen its administration and control of financial reporting by corporations; (2) strengthen the position of professional auditors and improve the quality of the corporate audit; and (3) clarify the public liability of professional auditors.

The ministry expanded its newly established Corporation Finance Division and instituted a program of "regular review" of financial statements filed by corporations[38] so that filing them with the Securities Bureau of the Ministry of Finance would no longer be viewed by corporations and CPAs as a routine process. In 1965, the auditing standards and working rules were revised to include procedures to confirm receivables and inventory balances,[39] to clarify the scope of verification required of the auditor and the form of audit report, and to clarify the meaning of audit independence. These revisions, which were subsequently incorporated

[36] Japan Securities Research Institute, *Securities Markets in Japan*, 198.
[37] Ballon, *Financial Reporting*, 164.
[38] Interview, Ministry of Finance, January 19, 1982.
[39] The previous nonconfirmation of these balances had allowed significant opportunities for accounting manipulation. Interview with Yoshio Aida, professor of accounting, Keio University, Tokyo, January 11 and 16, 1982.

in the ministerial ordinance on auditing, required that the audit report state whether the financial statements "present fairly" the financial position and results of the corporation, whether accounting policies conform with generally accepted accounting practices and have been applied consistently from year to year, and whether presentation of financial statements conform with the Securities Exchange Regulation.[40] The use of the term "present almost fairly" in audit reports was strongly discouraged, as was the practice of smoothing reported income through the inconsistent application of accounting practices.[41]

In regard to audit independence, the general audit standards required that the auditor maintain an independence in mental attitude in matters relating to the recognition of facts, the exercise of judgment on accounting treatments, and the expression of opinions in the audit report,[42] which was required to state whether the auditor was free from "special interests" with the company.

The revision to the ministerial ordinance on auditing, based on the revisions to the auditing standards and working rules, provided the legal basis for improving the quality of the audit of corporate financial statements required under Article 193-2 of the Securities Exchange Law. To support the effective operation of the legal requirement, the Certified Public Accountants Law was also revised in 1966 to strengthen the professional accountants' ability to implement the auditing requirements.

The revision to the Certified Public Accountants Law reorganized the JICPA as a *tokushu-hojin* (special judicial entity). The purpose of the reorganization was to make membership mandatory for all CPAs and to enable the JICPA to establish communications among its members and to guide and supervise their activities.[43] The Ministry of Finance, as administrator of the Certified Public Accountants Law, had the power to regulate the activities of CPAs individually; the JICPA reorganization provided the ministry with direct channels of access to CPAS collectively.

The 1966 revision to the Certified Public Accountants Law also introduced the concept of *kansa hojin* (audit corporation) to the

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[40] Japanese Institute of Certified Public Accountants, *Auditing Standards, Working Rules of Field Work, Working Rules of Reporting* (Tokyo: JICPA, 1974), 19-20.

[41] Gerhard G. Mueller and Hiroshi Yoshida, *Accounting Practices in Japan* (Seattle: Graduate School of Business Administration, University of Washington, 1968), 44.

[42] Japanese Institute of Certified Public Accountants, *Auditing Standards*, 1.

[43] Japanese Institute of Certified Public Accountants, *CPA Profession in Japan* (Tokyo: JICPA, 1979), 17.

Japanese accounting profession. *Kansa hojin* (literally, audit judicial entity) is similar to the Anglo-American partnership in terms of the scope of its liabilities; however, its legal form is different. Japanese law has no provision for the formation of Anglo-American–styled partnerships. Therefore, the concept of judicial entity was used. A *kansa hojin* must have at least five members, all of whom must be CPAs. All members assume joint and unlimited liability. Before the *kansa hōjin* commences operations, it must satisfy the Ministry of Finance that it has adequate facilities to provide an acceptable standard of audit.[44] With the rapid expansion of corporations and business generally in Japan at the time, the grouping of individual CPAs in *kansa hōjin* was designed to overcome the impracticality of independent audit of large corporations by individual practitioners, and to support the audit function with the competence and independence (through peer authority and joint responsibility) of an organized group with greater access to trained staff and internal quality control.[45]

The public liability of professional auditors was also extended by a revision to the Securities Exchange Law in 1972.[46] The revision specified the joint responsibility of CPAs, corporate officers, and underwriters for damages or losses to the public caused by manipulation or material misrepresentation in financial statements. The burden of proof was placed on the accountants, corporate officers, and underwriters against whom the case was brought. Prior to the revision, the burden of proof had rested on the prosecution, and the Securities Exchange Law had related only to the public liability of corporate officers and underwriters, not to CPAs.[47]

**Ministry of Justice**

The adverse public reaction to the fraudulent corporate bankruptcies also provided the stimulus for a revision to the Commercial Code by the Ministry of Justice. The revision was designed to strengthen the audit function in corporations subject to the provisions of the Commercial Code and to overcome the pre-existing

[44] Certified Public Accountants Law (1948), article 44.
[45] Ballon, *Financial Reporting,* 171.
[46] Securities Exchange Law (1947), as amended 1972, article 21.
[47] The general civil and criminal liability of certified public accountants acting in a professional capacity is also covered by the Civil and Criminal Codes of Japan. Although applicable prior to the 1972 revision to the Securities Exchange Law, the Civil and Criminal Codes cover liability of professional activities generally and do not relate specifically to CPAs.

situation where the statutory auditor's function was seen in most corporations as purely ceremonial.[48]

On October 1, 1974, three laws (referred to here as the revision laws) took effect.[49] The second of these, the Law on Special Cases under the Commercial Code on the Audit of Kabushiki Kaisha (*Kansa Tokurei Ho*), made a distinction for the purpose of audit requirements between small, medium, and large corporations on the basis of paid-up capital. The audit requirements for small companies (paid-up capital less than Yen 100 million) under the Commercial Code remained unchanged by the 1974 revisions, with such companies required to have the documents submitted to the shareholders' meeting by the directors and audited by a statutory auditor who still did not need to be a CPA.[50] The audit requirements for medium (paid-up capital between Yen 100 to 500 million) and large corporations (paid-up capital greater than Yen 500 million) were substantially strengthened with an increase in the responsibilities and duties of the statutory auditor for companies in both categories, and the requirement of an additional, professional (CPA) audit for companies in the large category.

The scope and duties of statutory auditors for companies in the medium and large categories were increased through the introduction of management audit, which required that statutory auditors supervise corporate directors in the performance of all their duties. Detailed powers were enumerated in the revision to the Commercial Code to support this requirement. The most important was the power to request any director to desist from an illegal or *ultra vires* act and to take the matter to court if necessary. The increased powers of the statutory auditor were supported by a provision requiring directors to report to the statutory auditor any fact that might cause material damage to the company.[51] The revision also provided that the financial statements, with the auditor's report, be forwarded to shareholders with the notice of meeting. Prior to the revision, shareholders had the right to inspect

[48] C. Bradshaw, "Joint Ventures in Japan," *Washington Law Review* (1963), 76-77.

[49] The law to amend part of the Commercial Code *(Shoho no ichibu o kaisei suru horitsu)* (Law No. 21, 1974); the Law on Special Cases under the Commercial Code on the Audit of Kabushiki Kaisha *(Kabushiki kaisha no kansa nado ni kansulu Shoho no tokurei ni kansuru horitsu)* (Law No. 22, 1974); and the Supplementary Law relating to the amendment of other laws affected by Laws No. 21 and 22 *(Shoho no ichibu o kaisei suru horitsu to no shiko ni tomonau kankei horitsu no seiri ni kansuru horitsu*) (Law No. 23, 1974).

[50] Interview with Kyojiro Someya, professor of accounting, Waseda University, Tokyo, January 13, 1982.

[51] Commercial Code (1899), as amended 1974, article 274-2.

the documents only at the company's offices in the week preceding the meeting.[52]

In regard to large corporations only, the 1974 revisions introduced the requirement for two audits, one by the statutory auditor and another by a professional (CPA) auditor who could not be an employee of the company.[53] The scope of the professional audit included viewing the corporate books of account, calling for reports on the accounts from directors and, when necessary, investigating the state of the company's business and assets. The professional auditor could also request reports from subsidiary companies on the state of their accounts.[54] Although the Securities Exchange Law had required a CPA audit since 1951, some 800 to 1,000 of the 2,500 corporations with paid-up capital in excess of Yen 500 million at the time were not subject to the Securities Exchange Law and had previously been subject only to statutory audit under the Commercial Code.[55]

The introduction of CPA audit to large corporations under the Commercial Code also involved the inclusion of a clause specifying the public liability of professional auditors. The professional auditor was made liable in damages to the company and third parties for any damage attributable to the negligent performance of his duties.[56] The liability clause applied the already extensive provisions for public liability under the code to professional auditors as well as statutory auditors.[57]

By contrast to the revisions to the auditing standards and working rules and the ordinance on auditing, which the Ministry of Finance made effective immediately following the investigation of Sanyo Special Steel, the revisions to the Commercial Code, administered by the Ministry of Justice, required a gestation period of almost nine years. Discussions on those revisions began shortly after the Sanyo Special Steel case, but were not promulgated until 1974. The nine years' formulation period reflects the relative power of corporations in Japan,[58] and the importance of compromise to achieve the harmonious implementation of legislative change.[59]

[52] M. D. H. Smith, "1974 Revision of the Commercial Code and Related Legislation," *Law in Japan: An Annual*, vol. 7, no. 71, 113-32.

[53] *Kansa Tokurei Ho* (1974), article 4(2)(1).

[54] Ibid., article 7.

[55] Ohno, Ichikawa, and Kodama, "Accounting Standards in Japan," 111.

[56] *Kansa Tokurei Ho* (1974), articles 9 and 10.

[57] Commercial Code (1899), as amended 1951, articles 277, 280, 267, 266-3, 281, 293-5, 486, 489, 498.

[58] G. L. Curtis, "Big Business and Political Influences" in *Modern Japanese Organization and Decision Making*, ed. Ezra F. Vogel (Berkeley: University of California Press, 1975), 54-68.

[59] Kazuo Yamanouchi, "Administrative Guidance and the Rule of Law," *Law in Japan: An Annual*, vol. 7 (1974), 22-31.

Based on their resistance to independent audit generally, corporations were strongly opposed to an increase in their legal audit obligations. Several compromises were required before the 1974 revisions to the Commercial Code were effected. The first compromise involved an increase in the lower limit of paid-up capital for corporations requiring a CPA audit under the code. The original draft for the revisions required an independent professional audit for all corporations with paid-up capital in excess of Yen 100 million. In terms of the classification of corporations in the 1974 revisions, a lower limit of Yen 100 million would have made all medium and large corporations subject to professional audit. Following objections by the corporations and their influential representative body, *Keidanren,* the lower limit was initially raised to Yen 300 million and then to Yen 500 million.[60] This increase served to exclude medium companies under the size classification of *Kansa Tokurei Hō.*

Additionally, only those corporations with paid-up capital in excess of Yen 1,000 million were required to appoint a CPA auditor before January 1, 1975, with the appointment of CPA auditors for corporations with capital between Yen 500 and Yen 1,000 million postponed until a date to be set.[61] The effect of the addendum (*fusoku*) restricting the application of the professional audit requirement to corporations with capital in excess of Yen 1,000 million was that, at the most, only an additional two hundred companies became subject to professional audit with the implementation of the 1974 revisions to the code, since most corporations were already subject to professional audit under the Securities Exchange Law.

## CONTEMPORARY AUDIT FUNCTION IN JAPAN

The legislative and administrative reforms introduced by the Ministries of Finance and Justice in response to the incidents of fraudulent bankruptcy were designed to strengthen the effective operation of the audit function in Japan. The impact of these changes on the audit function and on audit independence may be seen by examining administration of the contemporary audit function in Japan under both the Commercial Code and Securities Exchange Law.

[60] Interview, Professor Someya, January 13, 1982.
[61] Ibid.

### Administration of the Commercial Code

Although having responsibility for the Commercial Code, the Ministry of Justice takes a relatively passive role in its administration. The ministry may influence the pattern of code administration by recommending to the Diet that revisions to the code be effected. Corporate reports prepared under the provisions of the code are circulated, however, to shareholders but are not filed with or monitored by the Ministry of Justice. Administration of the Commercial Code may be described as the joint function of the corporate board of directors, the statutory auditor (and for large corporations the professional [CPA] auditor), and the shareholders both in general meeting and as individuals exercising their legal rights. Consequently, compliance with the audit provisions of the Commercial Code and the maintenance of audit independence are reliant on effective corporation/auditor relationships, necessitating the intrinsic acceptance of audit by corporate directors and the maintenance of independence by statutory and professional auditors, and the social control of individuals exercising their rights in law.

### Corporation/Auditor Relationships

The cultural determinants of relationships premised on interdependence rather than independence prevail in the contemporary attitude of corporations to both statutory and professional (CPA) audit. Although the 1974 revisions to the Commercial Code introduced management supervisory duties for the statutory auditors of "medium" and "large" corporations, the supervisory duties are stated in very general terms and have been interpreted in practice as implying widely varying levels of auditor rights and duties by corporate directors and managers.[62]

These problems associated with the operation of the statutory audit under the code are acknowledged by the Ministry of Justice.[63] However, they have been seen by academics,[64] Ministry of Justice officers,[65] and CPAs[66] to arise less from problems with the phrasing of the law than with the persisting attitude of Japanese corporations to the audit function generally. In 1981, the president of Nippon Miniature Bearing Co. noted that:

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[62] Interview, Seigo Nakajima, professor of accounting, International Christian University, Tokyo, January 21, 1982,

[63] Ibid.

[64] Ibid., and interview, Robert J. Ballon, director, International Management Development Seminars, Sophia University, Tokyo, January 12, 1982.

[65] Yasukazu Kagawa, cited in "Japanese Auditors Ineffective," *Asahi Evening News* (4 March 1981).

[66] Interview, Etsuo Sawa and Tetsuo Takeyama, January 18, 1982.

> . . . efforts to revise the Commercial Code over and over again in order to approach an ideal system is understandable, but unless the very system of Japan's business management is altered, nothing truly effective can be hoped for.[67]

And as the director-general of the Civil Affairs Bureau of the Ministry of Justice commented: "Even though the auditing system is strengthened through the revision of the Commercial Code, the basic problem is whether a proper person can be secured to operate the system."[68]

Although, since 1950, the code has provided that the statutory auditor may not be a director, manager or employee of the company, and despite the increase in the rights and duties of the statutory auditor for "medium" and "large" corporations under the 1974 revisions, corporate management continues to perceive the statutory auditor in an interdependent relationship with the corporation. The position of statutory auditor is still frequently regarded as a sinecure for retired senior employees and is viewed as "another rung in the executive promotional ladder."[69] The consequence is that the financial and mental independence necessary for the objective performance of the statutory auditor's review and supervisory duties remains absent.

In respect of the professional auditor, Japanese corporations continue to view independent CPA audit as "a necessary evil,"[70] an attitude which is reflected in the very low incidence of voluntary audit in Japan and the absence of consultation between corporations and CPAs for purposes other than audit.[71] The benefits of internal control and professional or management advisory services, often perceived to result from CPA involvement by corporations in Western nations, are not similarly valued or sought by Japanese corporations.[72]

The strength of corporate resistance to independent audit is visible also in the length of the "temporary relief" from CPA audit accorded, following the 1974 revision to the Code, to large corporations with paid-up capital between Yen 500 and Yen 1,000

[67] Takami Takahashi, cited in "Japanese Auditors Ineffective," *Asahi Evening News* (4 March 1981), 6.

[68] Stated as a meeting of the House Judicial Affairs Committee, two days after "window-dressing" associated with the corporate reports of Fuji Sash was revealed in May 1978 (*Asahi Evening News*, 4 March 1981).

[69] Interview, Professor Nakajima, January 21, 1982.

[70] Interview, Etsuo Sawa and Tetsuo Takeyama, January 18, 1982, and interview, Professor Ballon, January 12, 1982.

[71] Interview, R. Yonke, partner, Coopers & Lybrand, January 14, 1982.

[72] Interview, Etsuo Sawa and Tetsuo Takeyama, January 18, 1982.

million. The "temporary relief" was removed in the 1981 revisions to the Codes, effective 1984. The corporations had been given ten years' "acceptance time." Additionally, the 1981 revisions provided that corporations whose accounts are audited by both a professional and statutory auditor do not require shareholder meeting approval of their financial statements. It is only necessary that these corporations present their financial statements to the meeting of shareholders and publish a summarized balance sheet and income statement in the press.[73] This provision may be regarded as an inducement, designed to provide "special treatment" for "large" corporations which comply with the professional audit requirements, and potentially to encourage "medium" corporations to undergo voluntary professional audit. Nakajima predicts, however, that any proposed extension of CPA audit to "medium" corporations will involve a lengthy period of negotiation and "acceptance time."[74]

Even after the strengthening of the audit provisions of the Commercial Code, the attitude of Japanese corporations to an independent audit remains resistant. Nor is that resistance effectively countered at this stage by the introduction of audit corporations in the revision to the Certified Public Accountants Law in 1966 or by the JICPA, acting as a professional association in its own right.

*Kansa hōjin* (audit corporations) dominate the professional audit of corporations in Japan. As a result of a consistent series of mergers of individual practitioners and groups of CPAs since the 1966 revisions to the Certified Public Accountants Law, some seventy *kansa hōjin* are currently in Japan, and approximately two-thirds of professional audits are now conducted in the name of *kansa hōjin.*[75] Despite this domination, the realization of the underlying purpose of the *kansa hōjin* — the promotion of competence and independence in an audit through peer authority, joint responsibility, and greater access to trained staff — has been constrained by the persistence of original group bonds in the newly established audit corporations. Existing bonds between groups which merged to comprise *kansa hōjin* have been seen as creating barriers across those groups with the result that, in many cases, the audit corporations operate as a number of different individuals

[73] Commercial Code (1899), as amended 1981, section 2.
[74] Interview, Professor Nakajima, January 21, 1982.
[75] Japanese Institute of Certified Public Accountants, *Corporate Disclosure in Japan — Overview* (Tokyo: JICPA, 1982), 13.

and groups with the commonality of name only.[76] The consequence is that large corporations in Japan are still frequently audited by individual or small groups of practitioners, and the problems stemming from the auditor's position of weakness relative to the corporations still remain.

Additionally, although the contemporary structure and many of the functions of the JICPA are similar to those of counterpart Western associations — the American Institute of Certified Public Accountants (AICPA), in particular — its status, power of self-determination, and influence are much more circumscribed. Through its various committees, the JICPA conducts research, makes proposals for reforms in accounting, auditing, taxation, and professional practices, sponsors courses to improve the quality of services offered by CPAs, and requires self-discipline of its members through rules of conduct.[77] The JICPA, however, has neither the power to issue accounting standards,[78] nor the ability to determine audit fees unilaterally,[79] nor the ultimate responsibility to issue "licenses to practice" for CPAs or to suspend or revoke licenses.[80] Consequently, to ensure compliance with legislative audit provisions and maintain audit independent, the JICPA, as a professional association acting in its own right, is neither powerful nor influential.[81]

## SOCIAL CONTROLS

A common feature of the revision to the Commercial Code and the Securities Exchange Law was the inclusion of provisions specifying professional audit liability to the public for damages occasioned by the auditor's negligence, misrepresentations, and fraud. Furthermore, the extensive liability provisions for statutory auditors, introduced to the Commercial Code during the Allied occupation, remain in force. Despite the specification of extensive public liability of auditors and the further occurrence of instances

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[76] Interview, R. Yonke, January 14, 1982, noted the very limited interaction between groups within the audit corporations and projected a period of two to three generations before the corporations may operate effectively as single groups.
[77] Japanese Institute of Certified Public Accountants, *CPA Profession in Japan*, 17.
[78] Interview, Etsuo Sawa and Tetsuo Takeyama, January 18, 1982.
[79] Auditors' fees are negotiated between the JICPA and *Keidanren* every two years and are much lower than those charged by international accounting firms. From interviews with Masaaki Ayukawa, and Etsuo Sawa and Tetsuo Takeyama, January 18, 1982.
[80] Interview, Ministry of Finance, January 19, 1982.
[81] This conclusion was consistently supported in the interviews with practitioners (Yonke, Sawa and Takeyama, and Ayukawa), and government officials and representatives of the JICPA itself.

of bankruptcy cases caused by fraud involving major corporations between 1974 and the present time,[82] however, no case for damages has been brought against either a professional or statutory auditor in Japan. This was the case even where the auditor may have publicly accepted the responsibility for the persistence of corporate fraud and financial statement manipulation.[83]

The absence of third-party litigation arising from auditor's liability is consistent with the general low level of litigation in Japan. Although the Japanese are very law-abiding,[84] they are not litigious. The literature on law in Japan frequently refers to the "lack of rights consciousness" among the Japanese people.[85] Some authors attribute the low incidence of court cases in Japan to the relative newness of its Western-style democracy and court systems. Most social scientists suggest, however, that the exercise of legal rights in a court of law is not in accord with underlying Japanese beliefs in the maintenance of harmony in interpersonal and intergroup relationships and the avoidance of open confrontation.[86] The Japanese are said to prefer their traditional practices of renegotiation and compromise to the public settlement of disputes, which, with its judgment in terms of right and wrong, do not achieve a harmonious balance between the parties concerned.[87] Sawa and Takeyama note additionally that the philosophy of Japanese and Western investors is different; Japanese investors look to the corporation and its directors for the attribution of fault, not to those with legally described professional relationships with the corporation.[88]

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[82] For example, Nihon Netsugaku in 1974 with fraudulent manipulations in financial statements amounting to Yen 3.5 billion and Tokyo Tokei Seizo in 1974 with fraudulent manipulations amounting to Yen 1.6 billion in the preceding year (Ballon, *Financial Reporting*, 167). In May 1978, Fuji Sash Industries and Fuji Sash Sales entered bankruptcy with overstated income of Yen 33.4 billion and Yen 9.6 billion, respectively (interview, Professor Someya, January 13, 1982), and in 1980, Kokusai Denshin Denwa Co. (*Asahi Evening News*, 4 March 1981).

[83] Interview, Etsuo Sawa and Tetsuo Takeyama, January 18, 1982.

[84] Reischauer, *The Japanese*, 267.

[85] Arthur T. von Mehren, ed., *Law in Japan–The Legal Order in a Changing Society* (Cambridge, Mass.: Harvard University Press, 1963); Dan F. Henderson, *Foreign Enterprise in Japan, Law and Politics* (Chapel Hill, N. C.: University of North Carolina Press, 1973), and "Dispute Resolution: A Thumbnail Sketch of the Japanese Litigation System," paper presented at Melbourne, Australia, March 17, 1980; and B. Marks, *Australian-Japanese Business Transactions, Legal Aspects* (Sydney: CCH Australia Ltd., 1978).

[86] Marks, *Australian-Japanese Business Transactions*, 18.

[87] Reischauer, *The Japanese*, 265, notes that only in cases of traffic accidents, which bring entirely unrelated persons into conflict, has there been a sharp increase in litigation in recent years.

[88] Interview, Etsuo Sawa and Tetsuo Takeyama, January 18, 1982.

Regardless of the reason for the absence of litigation arising from auditor liability under the Commercial Code, it must be concluded that the inherent qualities of corporate acceptance of audit, professional support of auditor independence, and the social control of individuals exercising their legal rights remain absent in the contemporary administration of reporting and auditing requirements under the Commercial Code.

### ADMINISTRATION OF SECURITIES EXCHANGE LAW

The Ministry of Finance, which is responsible for the Securities Exchange Law, is much more active in its administration than is the Ministry of Justice in administering the Commercial Code. Consequently, although Japanese corporations do not accept audit independence as a concept, they do, in contrast with the situation existing prior to the Sanyo Special Steel case and the revisions to the Securities Exchange Law, accept the independent audit provisions of the Securities Exchange Law as a legal and bureaucratically enforced requirement. The reason for such acceptance lies primarily in the involvement of the Ministry of Finance. This ministry exercises close supervision and control over the JICPA, maintains the qualification standard and quality of CPAs, and supports the legal requirement of independent audits with substantial "administrative guidance" directed toward "encouraging" corporations to respect CPAs as independent authorities and "encouraging" CPAs to maintain their independence in the face of corporate resistance.

### SUPERVISION AND CONTROL OF JICPA

Unlike the relationship between professional accounting associations and government ministries in most Western nations, the JICPA is closely supervised by officers of the ministry's Securities Bureau. The basis for this supervision does not rest in an overt or documented association between the JICPA and the Ministry of Finance, with JICPA representing itself publicly as an independent association,[89] with

> purposes to guide, establish communications and supervise its members effectively . . . [and] . . . the responsibility delegated by the Ministry of Finance, for registration of CPAs and assistant CPAs.[90]

The Certified Public Accountants Law, however, accords the Min-

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[89] Japanese Institute of Certified Public Accountants, *CPA Profession*, 17.
[90] Ibid.

istry of Finance jurisdiction over the registration and deregistration or suspension of CPAs. The revision of this law in 1966 made it mandatory for CPAs to be members of the JICPA. The Ministry of Finance was thus able to supervise the activities of both the individual CPAs and the collective body. These supervisory powers are used consistently by the ministry to monitor and encourage compliance with Securities Exchange Law.

Although the responsibility of CPA registration is theoretically delegated to the JICPA,[91] the CPA examinations required for qualification are set by the Ministry of Finance. The number of successful graduates is also controlled by the ministry.[92] In practice, decisions on registration are made by the Ministry of Finance using the JICPA as an intermediary body to implement those decisions.[93] The Securities Bureau of the Ministry of Finance, through the JICPA, monitors the activities of CPAs. All *kansa hōjin* and individual practitioners must provide confidential lists of clients, qualified reports, and audit times to the JICPA, as well as a report on each audit conducted.[94] These reports are available to and monitored by the Securities Bureau. The Securities Bureau of the Ministry of Finance, rather than the JICPA, determines the suspension or revocation of CPA licenses.[95]

Despite the public claim of independence for JICPA and the lack of overt association between the JICPA and the Ministry of Finance, the initiative and influence in respect to the audit function rest with the Ministry of Finance. The authority of the ministry relative to the JICPA is also visible in accounting and audit standard formulation. The initiative is taken by the ministry, which issues regulations in the form of ministerial ordinances based on standards and working rules formulated by its Business Accounting Deliberation Council.[96] The JICPA is limited to issuing administrative guidelines to its members based on the existing regulations, standards, and working rules.[97]

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[91] Ibid.

[92] Interview, Masaaki Ayukawa, January 18, 1982.

[93] Interview, Ministry of Finance, January 19, 1982.

[94] Interview, R. Yonke, January 14, 1982.

[95] Interview, Ministry of Finance, January 19, 1982.

[96] The role of a Deliberation Council is to advise the ministry. The council is usually composed of officers of the ministry, university professors, and representatives of the various groups that may be affected by legislation under consideration by the ministry. See Hideo Tanaka and Malcolm D. H. Smith, eds., *The Japanese Legal System: Introductory Cases and Materials* (Tokyo: University of Tokyo Press, 1976), 55.

[97] Interview with Yoshiaki Yamauchi, partner, Arthur Andersen, Tokyo, January 14, 1982; and Interview, Masaaki Ayukawa, January 18, 1982.

## QUALIFICATION STANDARDS OF CPAS

The Ministry of Finance is "vitally concerned with the quality of CPA audit"[98] to attain its objective of compliance with the Securities Exchange Law and to maintain audit independence. The qualification process for CPAs in Japan requires compliance with high standards. Entry is gained by successfully completing three examinations. Exemption from the first is available to university graduates. Completion of the second examination allows the candidate assistant CPA qualification. The third examination requires a three-year apprenticeship period between the second and third examinations and allows CPA qualification.[99] The number of successful candidates is extremely low, averaging less than 400 (7.2 percent) for the second examination over the five-year period from 1974 to 1978, and 219 (18.1 percent) for the third examination.[100]

With its control of the examination and qualification requirements of CPAs, the Ministry of Finance is able to restrict the number of CPAs and maintain a high standard of CPA quality. While the JICPA, as a professional association, may be regarded as lacking power and influence in the administration of independent audit, the status and reputation of individual CPAs in Japan are extremely high.[101]

## ADMINISTRATIVE GUIDANCE

Administrative guidance (*gyōsei shidō*) is a difficult phrase to define since the process involved has no real equivalent in Western societies. Government ministries in Japan are reluctant to disclose their own operations in this area. Narita defines *gyōsei shidō* as

> that series of operations by which administrative organs . . . exercise influence over specific individuals, public and private juristic persons and associations through nonauthoritative and voluntary means, and guide parties by means of their own agreement and co-operation towards the formation of a definite system, the goal which administrative organs seek.[102]

Administrative guidance is not merely a series of objectives issued by ministries within the confines of its statutory authority. Rather, it is the result of constant consultation between a ministry and parties whose actions and decisions fall within the ministry's

[98] Interview, Ministry of Finance, January 19, 1982.
[99] Japanese Institute of Certified Public Accountants, *CPA Profession*, 15-16.
[100] Ibid., 16.
[101] Interview, Ministry of Finance, January 19, 1982.
[102] Y. Narita, "Administrative Guidance," *Law in Japan: An Annual*, vol. 2 (1968), 46.

general sphere of responsibility. Much of the administrative guidance in the postwar period has been exercised by the powerful Ministry of Finance and the Ministry of International Trade and Industry, and directed toward corporations for the promotion of Diet policy objectives. An example is the concentration of Japanese capital and corporate skills in rebuilding the steel, shipbuilding, coal, and electric power industries. More recently, administrative guidance has been directed toward the national problems of high energy costs, pollution, and raw material shortages.[103]

The consultation process between the ministries and corporations is not always smooth. The process of coercion and cooperation is, however, politically and publicly muted.[104] Corporations will comply because it is understood that compensating favors will be channeled in their direction when the opportunity arises,[105] and because of the ministries' power to punish recalcitrant companies. The Ministry of Finance, for example, supervises the activities of the Bank of Japan and is thus in a very strong position to influence the corporate lending policies of the commercial banks. Since bank loans are a major source of finance for many corporations, administrative guidance channeled through the banks has significant influence in corporate activities.[106]

The ministries are in a position to implement quite unpalatable directives and can create difficulties for uncooperative corporate directors by their control over licenses, permits, and special benefits. They are also aware, however, of the value of harmonious business-government relations. They attempt to form their policies in an acceptable format,[107] and to rely on the process of compromise and the granting of corresponding concessions to corporations in the implementation of policies. For example, to facilitate the harmonious implementation of the revisions to the auditing stan-

[103] Reischauer, *The Japanese,* 192.

[104] Curtis, "Big Business."

[105] For example, to ease the inflationary pressure of the OPEC embargo in the early 1970s, the Ministry of International Trade and Industry prohibited oil companies from increasing their prices as much as the oil import prices rose, with the result that the oil companies' profits rapidly declined. In 1977, the yen strengthened significantly and oil became much cheaper to import. Contrary to initial public expectations, oil prices were allowed to remain high for longer than was necessary to compensate the oil companies for their earlier cooperation. See Ezra F. Vogel, "Guided Free Enterprise in Japan," *Harvard Business Review* (May-June 1978), 164.

[106] H. Trezise and Yukio Suzuki, "Politics, Government and Economic Growth in Japan," in *Asia's New Giant*, ed. H. Patrick and Rosovsky (Washington, D. C.: The Brookings Institute, 1976), 786.

[107] Yamanouchi, "Administrative Guidance," 22-31.

dards and working rules in 1966, the Ministry of Finance accorded several significant concessions to corporations. One entailed the ministry revising the reporting provisions for corporations subject to both the Securities Exchange Law and the Commercial Code. Prior to this revision in 1975, corporations subject to both the Securities Law and the Commercial Code had been required to prepare two different sets of financial statements embodying different concepts of income.[108] Corporations subject to both sets of reporting provisions had protested at the inconvenience of preparing two different types of income statements for many years.[109] Although academic opinion on the intrinsic desirability of harmonization was divided,[110] the Ministry of Finance granted corporations the right to prepare statements under Securities Exchange provisions similar to those required under the Commercial Code.[111]

The Ministry of Finance makes active and consistent use of administrative guidance to ensure compliance with the reporting requirements of the Securities Exchange Law, and to maintain audit independence, through regular review of corporate periodic reports and registration statements. The Corporation Finance Division of the Securities Bureau currently maintains ten full-time examiners to review the audited financial statements filed with it under Securities Exchange Law. All corporate registration statements are inspected by Corporation Finance Division examiners. From time to time, all corporate periodic reports are inspected.[112]

The review process provides the Ministry of Finance with the means to encourage compliance with the securities Exchange Law through administrative guidance to both corporations and CPAs. Although the periodic reports of all corporations may be reviewed from time to time, the selection of corporations for review at a particular time is neither random nor rotational but directed toward corporations the ministry perceives to require improvements in

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[108] Income statements prepared under Securities Exchange Law utilized a "current operating" approach with only revenues and expenses related to current operating activities included in the statement. Income statements prepared in accordance with the Commercial Code embodied an "all-inclusive" approach, and thus included all revenues, expenses, extraordinary, and special items.

[109] Ohno, Ichikawa, and Kodama, "Accounting Standards in Japan," 118.

[110] Interview, Professor Someya, January 13, 1982; and Interview, Professor Aida, January 11, 16, 1982.

[111] More detailed disclosure is required, however, in the statements and schedules prepared under Securities Exchange Law (Interviews with Someya, January 13, 1982; and Aida, January 11, 16, 1982).

[112] Interview, Ministry of Finance, January 18, 1982.

their reports.[113] The results of such inspections may include requests for explanations from auditors, advice to corporations on required improvements to their financial reporting and, occasionally, a requirement to resubmit. The ministry's practice of publicizing all qualified audit reports exerts pressure on the corporations to comply with the disclosure requirements of the Securities Exchange Law and to adjust financial statements as requested by CPA auditors because a publicly disclosed audit qualification generally impacts the corporation adversely and may affect its credit rating with the banks.[114]

Administrative guidance is also used consistently to reinforce and ensure independence in audit. Although corporate report inspection by the Corporation Finance Division typically assumes the quality of prior CPA audit, the Corporation Finance Division examiners also conduct audit inspections. The results of such inspections may include direct requests for explanations from auditors, and additionally the issuance of advice and warnings to CPAs or the suspension or revocation of CPA licenses to practice. In the absence of social controls or auditor negligence, misrepresentation, or fraud, disciplinary action in all cases of auditor liability has taken the form of administrative guidance issued by the Ministry of Finance through warnings, license revocation, or license suspension. Although license suspension is temporary in formal terms, it becomes permanent in practical terms since the practitioner loses his or her professional integrity.[115]

## CONCLUSIONS

In contrast to Western societies, the cultural determinants of interpersonal and intergroup relationships in Japan preclude an intrinsic acceptance of audit independence. Consequently, greater reliance on institutional controls is required to ensure compliance with legislative reporting provisions and to maintain auditor independence. Such control is essentially absent in corporate reporting under the Commercial Code. Consequently, the Ministry of Justice, in administering the code, has been much less able to enforce compliance with the code's audit provisions following the legislative and administrative reforms of the 1960s and 1970s than the Ministry of Finance. The solution of administrative guidance

[113] Ibid.

[114] The Japanese stock exchanges also follow the practice of publicizing qualified audit reports.

[115] Ballon, *Financial Reporting,* 164.

used by the Ministry of Finance is not feasible for the Ministry of Justice given the large number of corporations subject to the Commercial Code,[116] 1,426,441 compared with 2,726 subject to the Securities Exchange Law[117] and the relatively small number of professionally qualified accountants. In contrast, the active involvement of the Ministry of Finance in the administration of the audit provision of the Securities Exchange Law serves to maintain an independent relationship between corporations and CPA auditors through the close supervision of corporate reporting and audit requirements and the extensive use of administrative guidance. Although the maintenance of independence in this way may appear artificial in Western terms, it constitutes effective and necessary support of independent relationships in the essentially interdependent cultural environment in Japan.

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[116] Dodwell Marketing Consultants, *Industrial Groupings in Japan*, rev. ed. (Tokyo: Dodwell Marketing Consultants, 1980).

[117] Ministry of Finance, Securities Bureau, *Negotiable Securities Annual* (Tokyo: Ministry of Finance, 1981), 11, translated by Japanese-English Translation Services, Sydney.

# *Mexican Market Efficiency: A Study of the Information Content of Accounting Numbers*

ADRIAN WONG-BOREN and ANDREW H. BARNETT*

In recent years, many studies have been undertaken to document the information content of accounting numbers. While most of these studies refer to companies whose shares are traded on well-known stock exchanges (mainly the New York Stock Exchange), insufficient empirical insight exists as to the information content of financial information released by Mexican firms, due principally to the virtual impossibility of obtaining machine-readable data bases. This insufficiency is significant in view of the fact that the Mexican Stock Exchange (MSE) is, according to an International Monetary Fund survey, one of only three developmentally significant securities markets in the developing world.[1]

Market efficiency research results are significant not only to Mexican interests but also internationally. Such results are potentially useful to the Mexican Securities and Exchange Commission (SEC) in improving the quality of publicly available accounting information. Additionally, such results are useful in international accounting research to provide perspective as to comparative efficiency across international boundaries.

This article hypothesizes that accounting information presented in Mexican reports is useful for investors in equity securities. The MSE, like Wall Street, has a good record in anticipating economic turnarounds; for example, in 1981, the index dropped rapidly

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[1] U. Tun Wai and H. T. Patrick, "Stock and Bond Issues and Capital Markets in Less Developed Countries," International Monetary Fund Staff Papers (March 1973).

from 1,500 to the mid-800s, long before anyone realized that Mexico's oil boom economy was going to burst. And in June 1982, before Mexico reached the depths of its financial troubles, the index sank to a historic low of 469.

It is assumed that the market model is a good surrogate of the stochastic process that generates security returns. Regression analysis is used to find the unsystematic errors. Earnings per share and cash flow are used as the accounting numbers because of their theoretical support in the field of valuation theory. Three expectation models are used to generate investors' expectations since there is little knowledge about the time-series properties of the Mexican accounting numbers. In addition, three different indexes to measure abnormal returns are developed and compared.

The methodology used in this study essentially consists of two parts: (1) the use of "bad news" and "good news" signals developed by Ball and Brown[2] and (2) a methodology used by J. Patell[3] to test statistical significance of abnormal returns.

## BRIEF BACKGROUND OF THE MEXICAN STOCK EXCHANGE

The MSE was founded in Mexico City in 1894 and since then, the exchange has been dissolved and reorganized twice. The exchange has experienced three very distinct developmental phases: the pre-1975 era, the 1975-1980 era, and the post-1980 era.

The pre-1975 era was a stereotype of underdeveloped capital markets (i.e., the market was thin with little or no trading and with relatively few new public issues by private corporations). Information was poor and manipulation was believed to exist, especially for private issues. The occasional speculative splurges ended in crashes that eliminated the nascent public investors, and the market reverted to its lethargic state.[4]

In the 1975-1980 era, the MSE faced substantial structural changes, a tremendous growth in both the number and dollar volume of transactions, well-defined bull and bear markets, and a notable campaign to promote and develop the market for equity securities. The creation of the Securities Market Law in 1975, as well as the financial, economic, and confidence crises of 1976, is

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[2] Ray Ball and Phillip Brown, "An Empirical Evaluation of Accounting Income Numbers," *Journal of Accounting Research* (Autumn 1968), 159-78.

[3] James M. Patell, "Corporate Forecasts of Earnings per Share and Stock Price Behavior: Empirical Tests," *Journal of Accounting Research* (Autumn 1976), 246-76; and "Corporate Earnings Forecasts: Empirical Tests and Consumption-Investment Model" (Ph.D. dissertation, Carnegie-Mellon University, 1976).

[4] Wai and Patrick, "Stock and Bond Issues," 257.

considered to be the cornerstone for the development of the Mexican stock exchange. The administration of Presidente Lopez-Portillo (1976-1982) also played an important role in this development by promoting the role of the securities market in channeling resources into productive investments. For example, among the actions taken by the government were the following:

1. Individual capital gains from MSE–listed securities were exempted from taxation.
2. The Central Bank identified the securities market within its group of priority recipients for credit from the banking system.
3. The Mexican government created a new kind of participation security ("petro-bonos" or oil-bonds) with its maturity value pegged to the export price of Mexican crude oil.

In this second era, the MSE was considered to be the exchange with the most rapid growth in the world.[5]

Although the Portillo administration (1976-1982) played an important role in the development of the MSE, it also was responsible for a big downturn in stock activity. The post-1980 era began when the Portillo administration negotiated too many loans too fast on the back of Mexico's oil wealth and its robust 8 percent annual gross national product (GNP) growth. There have been several peso devaluations against the dollar. In addition, foreign currency controls were imposed and private banks were nationalized (since then, the shares of those banks have stopped trading). Inflation, which was 28.7 percent in 1981, is now approximately 100 percent. High interest rates have also drawn investors away from the stock market.

The post-1980 era is characterized by having a slow trading volume and a volatile market. The market index closed in 1982 at a higher level than its low of 469 in June 1982, but far below its high of 1,730 in May 1979.

### DISCUSSION OF THE PROBLEM

There is a presumption that the price of a stock at any given time reflects the consensus of future earnings of the firm. The abnormal rate of return measures errors in market expectations and is frequently used as a measure of the information content of accounting numbers. A common denominator of market studies is the observance of some function of abnormal price or volume

[5] Gustavo Petricioli, "Antecedentes y Perspectivas del Mercado de Valores," *Ejecutivos de Finanzas*, Ano VIII, no. 5.

performance in a time interval surrounding the release dates of accounting information.

Ball and Brown indicate that stocks with positive forecast errors tend to outperform the market and that stocks with negative forecast errors tend to do worse than the market.[6] Interestingly, Ball and Brown find that the market eventually anticipates information well in advance of the actual earnings release date.

An improved methodology is used to overcome some weaknesses inherent in the Ball and Brown methodology. Among the weaknesses that we seek to overcome are the following:

1. The use of only the sign of the forecast error (positive or negative) to determine good or bad news;
2. Statistical significance of the Abnormal Performance Index could not be determined because its statistical properties were unknown; and
3. The assumption that investors' expectations of future earnings are formed by the prediction model without evidence of the way investors determine expected earnings.

## METHODOLOGY

Accounting numbers are intended to portray information. Messages having information content should alter, or reinforce, users' expectations about a future event. Specifically, accounting numbers should alter (or reinforce) investor expectations about security specific parameters, which in financial theory are considered to be expected return and variance of return.

Previous empirical research indicates that a large portion of a security's price (rate of return) is derived from the general movement of stock prices. King found that, on the average, approximately 50 percent of the variation in an individual security's prices (returns) could be explained by its co-movement with a market factor.[7] It is important to mention, however, that the relative importance of the market factor varies across securities, and that the degree of responsiveness to the market factor (i.e., beta) also varies across securities. This common movement of stock prices is generated from information which affects all firms.

This research is particularly concerned with the reaction of a security's rate of return to accounting information pertaining to the firm's performance. To estimate this reaction, it was necessary

[6] Ball and Brown, "Empirical Evaluation," 159-78.
[7] Benjamin F. King, "Market and Industry Factors in Stock Price Behavior," *Journal of Business* (Supplement, January 1966), 139-90.

to extract the rate of return generated from market-wide information from the ex-post rate of return. To extract the effects of the general market influence, the market was employed.

The market model is based on the hypothesis that the risk premium on security j during interval t, ($R_{jt}$), is a linear function of the market risk premium ($R_m$). The risk premiums are formed by subtracting the riskless rate from the respective security and market returns. The relationship is given by

$$\tilde{R}_{j\tau} = \alpha_j + \beta_j \tilde{R}_{m\tau} + \tilde{\epsilon}_{j\tau}$$

where $R_{jt}$ = Rate of return of security j in period t.
$R_m$ = Rate of return in period t on a "market" portfolio of MSE common stocks, calculated as follows:

$$\tilde{R}_{m\tau} = 1/N \sum_{j=1}^{N} \tilde{R}_{j\tau}$$

$\alpha_j$ and $\beta_j$ are parameters and $\epsilon_{jt}$ the non-market–related component of security risk premium. The $\epsilon_{jt}$ variables are usually assumed to have expected values equal to zero, to be uncorrelated with the market return, to be serially uncorrelated, and to have finite variance.

Note that the "market" return contains the return of firm j. This violation should not be serious because the return on security j is only a small part of the index. Theoretically, firm j should have been excluded in the computation of the market index.

Our study tested for stability of the betas and found that the betas for 90 percent of the companies were statistically stable through time. While the scope of this article does not include a discussion of the beta stationarity tests, information is available from the authors.

The unsystematic returns were calculated as follows:

$$\tilde{u}_{jt} = \tilde{R}_{jt} - (\hat{\alpha}_j + \hat{\beta}_j \tilde{R}_{mt})$$

Under the ordinary least-squares regression assumptions, and the hypothesis that these assumptions hold during the nonestimation period, the $u_{jt}$'s are distributed such that:

$$E(\tilde{u}_{jt}) = 0$$

$$\text{Cov.}\ (\tilde{u}_j, \tilde{u}_{jt}) = \begin{cases} 0 \text{ for } s \neq t & s, t = -11, -10, \ldots, 3 \\ C_{jt}\sigma^2 \text{ for } s = t \end{cases}$$

$$\text{Cov.}\ (\tilde{u}_{jt}, \tilde{R}_{mt}) = 0 \qquad j = 1, 2, \ldots, N$$

To apply a test of significance, the additional restrictive assumptions are made: (1) that the return distributions are normals, and (2) that

$$\text{Cov.}\ (\tilde{u}_{it}, \tilde{u}_{jt}) = \begin{cases} 0 \text{ for } i \neq j \\ C_{jt}\sigma^2_j \text{ for } i = j \end{cases}$$

where $C_{jt}$ reflects the increase in variance due to prediction outside the estimation period.

$$C_{jt} = 1 + 1/T + \frac{(R_{mt} - \overline{R}_m)^2}{\sum_{\tau=1}^{T} (R_{m\tau} - \overline{R}_m)^2}$$

where T is 36 for most of the companies studied and

$$\overline{R}_m = 1/T \sum_{\tau=1}^{T} R_{m\tau}$$

### Empirical Determination of Forecast Error

Measurement of earnings expectations is an essential part of the research done in this area. Most research uses variants of the past net earnings as proxies for investors' expectations of earnings. Prior to the public availability of the actual accounting numbers, some expectation of them is assumed to exist in the market. This expectation of accounting variables is not observable, but it reflects the consensus of investors' estimates of the forthcoming accounting numbers. Consensus is reflected in the price of the security just prior to the announcement of the actual accounting numbers. The price change following the actual numbers is assumed to be related directly to the difference between expected and actual accounting numbers. Since there is no empirical insight of time-series properties of accounting numbers released by Mexican firms, three different expectation models were used in this study.

**Model One.** Naive model with inflation. Inflation is compounded in this model because in recent years, Mexico has suffered a high inflation rate, and it seems reasonable to expect investors to consider this factor in determining expected accounting variables. The model is the following:

$$\hat{X}_{t+1} = 1.25\ (X_t)$$

Martingale with drift models. Two models were used.

**Model Two.** The forecasted variable is assumed to change by the

same magnitude as the previous year changed from the year before that, i.e.,

$$\hat{X}_{t+1} = 2X_t - X_{t-1}$$

**Model Three.** The forecasted variable is assumed to change by the same rate that the previous year changed from the year before that, i.e.,

$$\hat{X}_{t+1} = X^2_t/X_{t-1}$$

After the expected accounting numbers were calculated, the next step was to calculate the forecast error ($e_j$), which is defined as the actual accounting numbers minus the expected:

$$e_j = X_{t+1} - \hat{X}_{t+1}$$

This forecast error is the principal variable which determines the composition of portfolios that are needed to evaluate the information content of accounting numbers. These portfolios accumulated the monthly abnormal returns ($u_{jt}$'s) by using three different indexes.

### Abnormal Performance Indexes

A number of abnormal performance indexes (APIs) are used to accumulate abnormal returns, both through time and across companies. These techniques focus on the average market model residuals of the sample of securities for a number of periods around the event under study. Pettit and Westerfield suggest that, under some conditions, different indexes may give "abnormal returns" results that vary widely.[8] To address this problem, the present study used the following three indexes.

1. The Ball and Brown index, which is calculated as follows:

$$API = \sum_{j=1}^{N} \prod_{t=-1}^{3} (1 + u_{jt})$$

2. The Fama et al. index, which is calculated[9] as follows:

$$CAR = 1/N \sum_{j=1}^{N} \sum_{t=-11}^{3} \{\ln(1 + R_{jt}) - [\hat{\alpha}_j + \hat{\beta}_j \ln(1 + R_{mt})]\}$$

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[8] R. Pettit and Randolph Westerfield, "Using the Capital Asset Pricing Model and the Market Model to Predict Security Returns," *Journal of Financial and Quantitative Analysis* (September 1974), 579-605.

[9] E. F. Fama, L. Fisher, and R. Roll, "The Adjustment of Stock Prices to New Information," *International Economics Review* (February 1969), 1-21.

3. The API developed by R. R. Pettit[10] is calculated in the following way:

$$\mathrm{API} = \prod_{t=-11}^{3} \left(1 + 1/N \sum_{j=1}^{N} u_{jt}\right)$$

These indexes were computed separately for two portfolios. The first portfolio consisted of all reports containing "good" news; the second consisted of all reports which contained "bad" news.

Two mutually exclusive criteria were used to determine whether the reports portrayed "good" or "bad" news: (1) the sign of the forecast error, and (2) the magnitude of the change in the forecast error.

With respect to criterion (1), a positive forecast error was defined as "good" news, since the actual changes in the firm's accounting numbers were larger than the expected ones. Accordingly, a negative forecast error was defined as "bad" news.

The magnitude of the forecast error (percentage forecast error) was defined as $(A-F)/(A+F)(.5)$, where A is the actual year's amount and F is the forecast year's amount. The denominator is an attempt to approximate the "normal" amount of the variable under study. It has the property of rarely equaling zero, which would occur only when both A and F equal zero. A percentage forecast error greater than the median percentage forecast error was defined as "good" news since the actual percentage change is better than half of the market. Accordingly, a percentage forecast error less than the median is defined as "bad" news.

**Sample and Analysis Period**

The period analyzed in this study is 1979. Accounting numbers are assumed to be announced three months after the close of the company's fiscal year (e.g., March 1980 for the fiscal year ending December 1979). The estimated parameters $\alpha$ and $\beta$ (based on thirty-six non-forecast months) were used to estimate monthly unsystematic returns $u_{jt}$ for a fifteen-month period ($t = -11, -10, \ldots, 3$), where the third month of the subsequent fiscal year was month 0.

Three kinds of data were required: annual EPS, annual cash flows, and share prices. Annual EPS and annual cash flows were extracted from the 1980 edition of *Enciclopedia del Mercado de Valores Mexicano.* Share price data were extracted from the security data file of the Instituto Tecnologico Autonomo de Mexico. Data

[10] R. R. Pettit, "Dividend Announcements, Security Performance, and Capital Market Efficiency," *Journal of Finance* (December 1972), 993-1007.

for dividends, splits, and rights were also collected from the latter source.

The following criteria were used to select the final sample.

1. The company must be actively traded.
2. The company should have sufficient monthly returns to permit calculation of the regression coefficient estimates and the abnormal performance index.
3. To be included in the sample, a company must not have been included in the financial institutions category. This criterion was used because financial institutions are governed by different accounting rules and by different laws. In addition, financial institutions do not report cash flow data.

The final sample consisted of seventy companies.

**Hypotheses and Statistical Tests**

Our study addresses the principal question of whether the earnings per share and cash flow numbers of MSE–listed firms contain information content. To assess the information content, we examined signs, magnitude of changes, and expected values of both non-cumulative and cumulative returns by testing the following three hypotheses:

$H_1$: There is no relationship between the sign of the forecast error and the sign of the abnormal return.

This hypothesis was tested by means of a two-by-two contingency table by using the chi-square statistic with one degree of freedom.

The second hypothesis tested is

$H_2$: The expected value of the abnormal return is equal to zero.

To test this hypothesis, a standardized prediction error was determined as follows:

$$(T-2)s^2_j/\sigma^2_j \sim x^2\ (T-2)$$

Under the conditions mentioned before, the following ratio is distributed as a Student t statistic with T − 2 degrees of freedom:

$$V_{jt} = u_{jt}/s_j\ \sqrt{C_{jt}} \sim t(T-2)$$

The $V_{jt}$'s are assumed to be independent random variables with known expected value and variances, and, in accordance with the

Central Limit Theorem, a non-cumulative normalized sum (Z[t]) can be formed:

$$Z(t) = \frac{\sum_{j=1}^{N} V_{jt}}{[\sum_{j=1}^{N} (T_j - 2)/(T_j - 4)]^{1/2}} \sim N(0,1)$$

This is the statistic used to test the second hypothesis. Since the abnormal performance indexes are cumulative in nature, this hypothesis was tested only for one portfolio consisting of all the sample companies. A cumulative prediction error was calculated to test each portfolio separately (i.e., the "good" and "bad" news portfolios). This cumulative prediction error was calculated by summing the prediction errors over time in the following way:

$$W_{jL} = \sum_{t=1}^{L} u_{jt}/s_j \sqrt{LC_{jt}} \sim t(T-2)$$

where $L(L \leq 15)$ represents the number of months in the accumulation.

Since the $W_{jL}$ follows a t distribution, a cumulative normalized sum (Z[L]) can be obtained in the following way:

$$Z(L) = \frac{\sum_{j=1}^{N} W_{jL}}{[\sum_{j=1}^{N} (T_j - 2)/(T_j - 4)]^{1/2}}$$

Then the following hypothesis was tested:

$H_3$: The expected value of the cumulative abnormal return is equal to zero.

This hypothesis was tested for the "good" and "bad" news portfolios, for every accounting variable, and for every expectation model.

We also assessed information content by judgmentally scanning the distribution of APIs. Information content was assumed to exist if the returns of the portfolios were "judged" to be sufficiently different from each other.

Finally, we used the association criterion first used by Beaver and Dukes[11] to determine which model approximates market expectations of the accounting numbers.

[11] William H. Beaver and Roland E. Dukes, "Interperiod Tax Allocation, Earnings Expectation and the Behavior of Security Prices," *Accounting Review* (July 1973), 320-32.

**Empirical Results**

Exhibit 1 summarizes the regression results from the monthly security returns. The mean value of 1.0130 for $\beta$ indicated that the sample, viewed as an equal weighted portfolio, bears a systematic risk virtually identical to the market index. The mean $R_m$ of 0.3421 indicates that approximately 34 percent of the variance in the monthly security return of a company can be accounted for by widespread movements in share prices. The Durbin-Watson statistic suggests that there is no relationship between abnormal returns in consecutive months.

Because of the large number of possible combinations (thirty-six in this study) and the similarity of the results, only one combination will be discussed here. All of the information needed to analyze the other possible combinations is contained in Exhibits 2 and 3.

The assumptions needed to analyze one possible combination are the following:

1. Investors use expectation Model 2 (on page 00) to forecast accounting numbers;
2. EPS is the accounting variable of interest;
3. Investors rely on the sign of the unexpected return and not on its magnitude to determine whether actual EPS contain "good" or "bad" news; and
4. Investors follow an investment strategy based on the Ball and Brown index.

No attempt was made in this section to determine which expectation model, which accounting variable, or which portfolio com-

**Exhibit 1. Regression Statistics in the Non-forecast Period**

| Decile | $\hat{\alpha}_j$ | $\hat{\beta}_j$ | $R^2$ | $S^2_j$ | D-W |
|---|---|---|---|---|---|
| .10 | −0.0421 | 0.4187 | 0.0846 | 0.0045 | 1.7466 |
| .20 | −0.0229 | 0.6486 | 0.1586 | 0.0053 | 1.8970 |
| .30 | −0.0126 | 0.7432 | 0.2312 | 0.0072 | 1.9896 |
| .40 | −0.0051 | 0.9319 | 0.2865 | 0.0100 | 2.1017 |
| .50 | 0.0034 | 1.0190 | 0.3387 | 0.0118 | 2.2726 |
| .60 | 0.0049 | 1.1750 | 0.3750 | 0.0137 | 2.3666 |
| .70 | 0.0137 | 1.2425 | 0.4312 | 0.0170 | 2.4023 |
| .80 | 0.0199 | 1.3608 | 0.5067 | 0.0196 | 2.5697 |
| .90 | 0.0324 | 1.4170 | 0.5832 | 0.0257 | 2.7869 |
| 1.00 | 0.0787 | 1.8867 | 0.8420 | 0.0553 | 3.4921 |
| Mean | 0.0018 | 1.0130 | 0.3421 | | |

**Exhibit 2. Summary Statistics by Month Relative to Annual Report Annoucement Date**

| Month relative to annual report announcement date | Model 1 (EPS, Sign) | | | | | | | Model 1 (Cash Flow, Sign) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | FFJR Index | | B&B Index | | Pettit Index | | $X^2$ | FFJR Index | | B&B Index | | Pettit Index | | $X^2$ |
| | Good | Bad | Good | Bad | Good | Bad | | Good | Bad | Good | Bad | Good | Bad | |
| −11 | 1.0144 | .9550 | .9764 | .9536 | 1.0158 | .9536 | 4.78 | 1.0175 | .9616 | 1.0183 | .8631 | 1.0183 | .9620 | 3.76 |
| −10 | 1.0240 | .9043 | 1.0005 | .9058 | 1.0314 | .9026 | 6.79 | 1.0330 | .9120 | 1.0425 | .8408 | 1.0415 | .9105 | 7.98 |
| −9 | .9939 | .9247 | .9801 | .9163 | 1.0255 | .9231 | 2.25 | .9861 | .9560 | 1.0037 | .8819 | 1.0192 | .9546 | 1.06 |
| −8 | 1.0184 | .8252 | .9993 | .8484 | 1.0515 | .8595 | 4.29 | 1.0050 | .8949 | 1.0268 | .8250 | 1.0400 | .9179 | 2.31 |
| −7 | 1.0247 | .8125 | 1.0020 | .8304 | 1.0573 | .8481 | 2.68 | 1.0128 | .8828 | 1.0346 | .8012 | 1.0478 | .9058 | 2.02 |
| −6 | 1.0389 | .7671 | 1.0198 | .8034 | 1.0723 | .8104 | 1.86 | 1.0261 | .8522 | 1.0511 | .7865 | 1.0617 | .8790 | 2.39 |
| −5 | 1.0178 | .7818 | 1.0039 | .9080 | 1.0500 | .8599 | 0.80 | 1.0075 | .8543 | 1.0373 | .8605 | 1.0421 | .9123 | 0.01 |
| −4 | 1.0225 | .7450 | 1.0070 | .8792 | 1.0635 | .8322 | 0.91 | 1.0163 | .8180 | 1.0400 | .8396 | 1.0598 | .8845 | 0.75 |
| −3 | 1.0165 | .7414 | 1.0141 | .8763 | 1.0629 | .8305 | 0.07 | 1.0102 | .8141 | 1.0543 | .8241 | 1.0594 | .8827 | 0.11 |
| −2 | 1.0189 | .7451 | 1.0275 | .9244 | 1.0620 | .8327 | 0.30 | 1.0137 | .8136 | 1.0718 | .8563 | 1.0606 | .8809 | 1.06 |
| −1 | 1.0437 | .6634 | 1.0783 | .9605 | 1.0880 | .7770 | 6.73 | 1.0475 | .7384 | 1.1312 | .8780 | 1.0950 | .8251 | 8.58 |
| 0 | 1.0381 | .6799 | 1.0800 | .9528 | 1.0819 | .7888 | 0.32 | 1.0406 | .7523 | 1.1346 | .8689 | 1.0881 | .8352 | 0.42 |
| 1 | 1.0435 | .6690 | 1.1037 | .9356 | 1.0886 | .7785 | 1.90 | 1.0512 | .7347 | 1.1648 | .8473 | 1.0998 | .8200 | 1.84 |
| 2 | 1.0460 | .6610 | 1.1005 | .9139 | 1.0902 | .7760 | 0.00 | 1.0507 | .7352 | 1.1595 | .8338 | 1.0978 | .8238 | 0.27 |
| 3 | 1.0474 | .6208 | 1.0657 | .8329 | 1.1000 | .7487 | 0.02 | 1.0459 | .7167 | 1.1174 | .7777 | 1.0990 | .8151 | 0.00 |
| | Model 2 (EPS, Sign) | | | | | | | Model 2 (Cash Flow, Sign) | | | | | | |
| −11 | 1.0160 | .9751 | .9951 | .9351 | 1.0196 | .9718 | 1.93 | 1.0082 | .9837 | 1.0104 | .9819 | 1.0104 | .9819 | 0.57 |
| −10 | 1.0360 | .9327 | 1.0296 | .9005 | 1.0489 | .9268 | 1.42 | 1.0211 | .9460 | 1.0332 | .8795 | 1.0303 | .9430 | 1.15 |
| −9 | 1.0067 | .9329 | .9989 | .9138 | 1.0404 | .9410 | 1.47 | .9940 | .9458 | 1.0056 | .8927 | 1.0237 | .9572 | 0.24 |
| −8 | 1.0298 | .8825 | 1.0266 | .8670 | 1.0666 | .9101 | 3.32 | 1.0191 | .8836 | 1.0360 | .8327 | 1.0508 | .9173 | 4.17 |
| −7 | 1.0269 | .8898 | 1.0235 | .8652 | 1.0645 | .9141 | 0.17 | 1.0231 | .8804 | 1.0389 | .8209 | 1.0555 | .9120 | 1.57 |
| −6 | 1.0335 | .8777 | 1.0392 | .8581 | 1.0730 | .9019 | 0.06 | 1.0448 | .8406 | 1.0628 | .7972 | 1.0789 | .8756 | 0.98 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| −5 | 1.0434 | .8351 | 1.0866 | .8246 | 1.1056 | .8631 | 1.42 | 1.0579 | .7866 | 1.1097 | .7586 | 1.1132 | .8286 | 1.39 |
| −4 | 1.0434 | .8207 | 1.0844 | .8182 | 1.1180 | .8525 | 0.28 | 1.0567 | .7725 | 1.1018 | .7580 | 1.1236 | .8186 | 0.10 |
| −3 | 1.0336 | .8216 | 1.1048 | .8004 | 1.1145 | .8544 | 0.11 | 1.0460 | .7762 | 1.1191 | .7402 | 1.1180 | .8235 | 0.02 |
| −2 | 1.0510 | .8023 | 1.1692 | .7735 | 1.1318 | .8359 | 2.88 | 1.0618 | .7553 | 1.1696 | .7157 | 1.1346 | .8032 | 2.20 |
| −1 | 1.0772 | .7604 | 1.2494 | .7633 | 1.1610 | .8072 | 3.93 | 1.0978 | .7604 | 1.2583 | .6921 | 1.1750 | .7567 | 5.25 |
| 0 | 1.0855 | .7488 | 1.2632 | .7421 | 1.1683 | .7996 | 0.01 | 1.1025 | .6813 | 1.2675 | .6746 | 1.1785 | .7525 | 0.07 |
| 1 | 1.0855 | .7516 | 1.2836 | .7450 | 1.1699 | .8005 | 0.42 | 1.1086 | .6740 | 1.2978 | .6589 | 1.1882 | .7446 | 0.75 |
| 2 | 1.0864 | .7500 | 1.2680 | .7470 | 1.1697 | .8013 | 0.53 | 1.1140 | .6644 | 1.2845 | .6599 | 1.1945 | .7384 | 0.24 |
| 3 | 1.0821 | .7337 | 1.2010 | .7299 | 1.1722 | .7937 | 0.02 | 1.0983 | .6660 | 1.2070 | .6653 | 1.1814 | .7468 | 1.10 |
| | Model 3 (EPS, Sign) | | | | | | | Model 3 (Cash Flow, Sign) | | | | | | |
| −11 | .9917 | 1.0042 | .9886 | .9576 | .9886 | 1.0072 | 0.09 | 1.0002 | .9981 | .96810 | .9722 | 1.0004 | .9993 | 0.01 |
| −10 | 1.0334 | .9664 | 1.0503 | .9267 | 1.0449 | .9651 | 0.24 | 1.0048 | .9835 | .98375 | .9697 | 1.0097 | .9872 | 0.02 |
| −9 | .9928 | .9650 | 1.0072 | .9347 | 1.0303 | .9767 | 0.95 | .9988 | .9570 | .97030 | .9580 | 1.0193 | .9822 | 0.23 |
| −8 | 1.0370 | .9233 | 1.0620 | .8928 | 1.0748 | .9503 | 1.88 | 1.0256 | .9209 | 1.0464 | .9299 | 1.0464 | .9622 | 1.60 |
| −7 | 1.0360 | .9262 | 1.0591 | .8903 | 1.0763 | .9505 | 0.62 | 1.0088 | .9375 | .9789 | .9402 | 1.0310 | .9753 | 0.32 |
| −6 | 1.0471 | .9169 | 1.0782 | .8881 | 1.0896 | .9413 | 0.00 | 1.0030 | .9403 | .9880 | .9441 | 1.0277 | .9764 | 0.23 |
| −5 | 1.0871 | .8705 | 1.1666 | .8543 | 1.1661 | .8973 | 6.48 | 1.0112 | .9117 | 1.0535 | .9167 | 1.0644 | .9471 | 3.20 |
| −4 | 1.0654 | .8750 | 1.1378 | .8650 | 1.1578 | .9038 | 0.09 | .9824 | .9249 | 1.0301 | .9270 | 1.0491 | .9611 | 1.40 |
| −3 | 1.0566 | .8719 | 1.1616 | .8567 | 1.1528 | .9059 | 0.15 | .9841 | .9135 | 1.0454 | .9225 | 1.0572 | .9532 | 0.19 |
| −2 | 1.0773 | .8617 | 1.2286 | .8492 | 1.1755 | .8932 | 2.14 | .9978 | .9060 | 1.0990 | .9184 | 1.0702 | .9435 | 0.92 |
| −1 | 1.1185 | .8309 | 1.3374 | .8551 | 1.2247 | .8697 | 1.37 | 1.0092 | .8972 | 1.1795 | .9373 | 1.0846 | .9344 | 1.39 |
| 0 | 1.1257 | .8262 | 1.3424 | .8506 | 1.2308 | .8665 | 0.04 | 1.0108 | .8914 | 1.1902 | .9270 | 1.0840 | .9345 | 1.10 |
| 1 | 1.1257 | .8281 | 1.3050 | .8672 | 1.2337 | .8670 | 1.16 | 1.0069 | .8969 | 1.1956 | .9467 | 1.0823 | .9379 | 0.27 |
| 2 | 1.1201 | .8316 | 1.3237 | .8717 | 1.2236 | .8720 | 0.24 | 1.0095 | .8944 | 1.1686 | .9547 | 1.0851 | .9363 | 0.23 |
| 3 | 1.1048 | .8264 | 1.2433 | .8475 | 1.2123 | .8735 | 0.01 | .9871 | .8962 | 1.1014 | .9253 | 1.0616 | .9488 | 0.44 |

**Note:** Probability (chi-square ≥ 3.84 | $x^2 - 0$) = .05, for one degree of freedom.
Probability (chi-square ≥ 6.64 | $x^2 - 0$) = .01, for one degree of freedom.

**Exhibit 3. Summary Statistics by Month Relative to Annual Report Annoucement Date**

| Month relative to annual report announcement date | Model 1 (EPS, Magnitude) | | | | | | Model 1 (Cash Flow, Magnitude) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | FFJR index | | B&B index | | Pettit index | | FFJR index | | B&B index | | Pettit index | |
| | Good | Bad | Good | Bad | Good | Bad | Good | Bad | Good | Bad | Good | Bad |
| −11 | 1.0064 | .9918 | .9744 | .9663 | 1.0037 | .9958 | 1.0111 | .9877 | 1.0116 | .9292 | 1.0116 | .9886 |
| −10 | 1.0304 | .9560 | 1.0129 | .9394 | 1.0336 | .9616 | 1.0417 | .9474 | 1.0565 | .9003 | 1.0550 | .9441 |
| −9 | 1.0231 | .9291 | 1.0029 | .9244 | 1.0435 | .9554 | 1.0049 | .9489 | 1.0138 | .9163 | 1.0373 | .9620 |
| −8 | 1.0362 | .9013 | 1.0134 | .9076 | 1.0160 | .9415 | 1.0410 | .9005 | 1.0528 | .8733 | 1.0747 | .9313 |
| −7 | 1.0387 | .9056 | 1.0177 | .8991 | 1.0633 | .9407 | 1.0566 | .8884 | 1.0673 | .8545 | 1.0886 | .9211 |
| −6 | 1.0391 | .8999 | 1.0181 | .9102 | 1.0618 | .9405 | 1.0760 | .8679 | 1.0905 | .8448 | 1.1106 | .9020 |
| −5 | 1.0074 | .9068 | 1.0024 | .9560 | 1.0280 | .9705 | 1.0402 | .8787 | 1.0672 | .8961 | 1.0712 | .9323 |
| −4 | 1.0119 | .8904 | 1.0099 | .9384 | 1.0440 | .9582 | 1.0394 | .8677 | 1.0676 | .8858 | 1.0816 | .9264 |
| −3 | .9964 | .8951 | 1.0036 | .9537 | 1.0304 | .9688 | 1.0474 | .8499 | 1.0939 | .8699 | 1.0970 | .9131 |
| −2 | 1.0058 | .8901 | 1.0261 | .9759 | 1.0370 | .9629 | 1.0523 | .8495 | 1.1157 | .8926 | 1.0994 | .9106 |
| −1 | 1.0366 | .8552 | 1.0837 | 1.0122 | 1.0683 | .9356 | 1.0974 | .8029 | 1.1889 | .9150 | 1.1455 | .8761 |
| 0 | 1.0317 | .8604 | 1.0980 | .9966 | 1.0642 | .9388 | 1.1026 | .7981 | 1.2096 | .8940 | 1.1492 | .8731 |
| 1 | 1.0513 | .8431 | 1.1324 | .9885 | 1.0872 | .9209 | 1.1077 | .7956 | 1.2465 | .8848 | 1.1557 | .8706 |
| 2 | 1.0394 | .8547 | 1.1147 | .9903 | 1.0738 | .9327 | 1.0902 | .8118 | 1.2285 | .8863 | 1.1360 | .8851 |
| 3 | .9999 | .8755 | 1.0415 | .9701 | 1.0235 | .9715 | 1.0657 | .8169 | 1.1540 | .8658 | 1.1048 | .9034 |
| | Model 2 (EPS, Magnitude) | | | | | | Model 2 (Cash Flow, Magnitude) | | | | | |
| −11 | 1.0214 | .9755 | .9973 | .9418 | 1.0252 | .9729 | 1.0018 | .9966 | 1.0029 | .9396 | 1.0029 | .9968 |
| −10 | 1.0574 | .9252 | 1.0513 | .8966 | 1.0745 | .9187 | 1.0288 | .9596 | 1.0426 | .9134 | 1.0410 | .9566 |
| −9 | 1.0455 | .9026 | 1.0298 | .8936 | 1.0790 | .9176 | 1.0080 | .9459 | 1.0133 | .9166 | 1.0363 | .9836 |
| −8 | 1.0703 | .8612 | 1.0547 | .8606 | 1.1067 | .8936 | 1.0353 | .9059 | 1.0491 | .8768 | 1.0646 | .9409 |
| −7 | 1.0724 | .8618 | 1.0559 | .8541 | 1.1087 | .8943 | 1.0915 | .8932 | 1.0611 | .8604 | 1.0817 | .9278 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| −6 | 1.0850 | .8462 | 1.0768 | .8449 | 1.1236 | .8800 | 1.0706 | .8730 | 1.0862 | .8489 | 1.1038 | .9083 |
| −5 | 1.0628 | .8453 | 1.0694 | .8838 | 1.1001 | .8995 | 1.0523 | .8673 | 1.0795 | .8846 | 1.0847 | .9232 |
| −4 | 1.0477 | .8489 | 1.0588 | .8845 | 1.0972 | .9048 | 1.0354 | .8716 | 1.0649 | .8884 | 1.0802 | .9295 |
| −3 | 1.0506 | .8348 | 1.0811 | .8702 | 1.1059 | .8954 | 1.0398 | .8570 | 1.0909 | .8727 | 1.0908 | .9192 |
| −2 | 1.0610 | .8282 | 1.1115 | .8839 | 1.1147 | .8881 | 1.0517 | .8500 | 1.1220 | .8867 | 1.1008 | .9114 |
| −1 | 1.0871 | .7965 | 1.1675 | .9215 | 1.1422 | .8666 | 1.0937 | .8064 | 1.1880 | .9158 | 1.1444 | .8790 |
| 0 | 1.0934 | .7899 | 1.1678 | .8986 | 1.1473 | .8621 | 1.0978 | .8027 | 1.2056 | .8978 | 1.1467 | .8769 |
| 1 | 1.0958 | .7898 | 1.2172 | .8946 | 1.1516 | .8609 | 1.1063 | .7970 | 1.2406 | .8904 | 1.1569 | .8716 |
| 2 | 1.0983 | .7868 | 1.2136 | .8817 | 1.1536 | .8597 | 1.0910 | .8110 | 1.2240 | .8905 | 1.1393 | .8847 |
| 3 | 1.0752 | .7922 | 1.1513 | .8517 | 1.1249 | .8777 | 1.0720 | .8110 | 1.1632 | .8572 | 1.1171 | .8964 |
| | Model 3 (EPS, Magnitude) | | | | | | Model 3 (Cash flow, Magnitude) | | | | | |
| −11 | 1.0048 | .9934 | .9512 | .9613 | 1.0084 | .9912 | 1.0030 | .9952 | 1.0065 | .9341 | 1.0065 | .9931 |
| −10 | 1.0109 | .9755 | .9955 | .9567 | 1.0187 | .9765 | 1.0172 | .9692 | 1.0319 | .9203 | 1.0301 | .9652 |
| −9 | .9822 | .9701 | .9674 | .9600 | 1.0140 | .9841 | .9928 | .9595 | 1.0075 | .9199 | 1.0286 | .9696 |
| −8 | 1.0066 | .9309 | .9971 | .9238 | 1.0398 | .9612 | 1.0382 | .8993 | 1.0587 | .8623 | 1.0735 | .9294 |
| −7 | .9919 | .9483 | .9836 | .9322 | 1.0266 | .9747 | 1.0424 | .8979 | 1.0607 | .8551 | 1.0788 | .9262 |
| −6 | .9947 | .9432 | .9957 | .9326 | 1.0314 | .9685 | 1.0621 | .8759 | 1.0853 | .8429 | 1.1011 | .9054 |
| −5 | 1.0081 | .9061 | 1.0579 | .9006 | 1.0710 | .9313 | 1.0859 | .8283 | 1.1511 | .8074 | 1.1534 | .8624 |
| −4 | 1.0055 | .8968 | 1.0484 | .8998 | 1.0827 | .9239 | 1.0733 | .8289 | 1.1345 | .8137 | 1.1515 | .8664 |
| −3 | .9872 | .9034 | 1.0629 | .8944 | 1.0709 | .9322 | 1.0776 | .8139 | 1.1703 | .7870 | 1.1609 | .8577 |
| −2 | 1.0069 | .8890 | 1.1243 | .8777 | 1.0906 | .9153 | 1.1068 | .7891 | 1.2421 | .7599 | 1.1929 | .8343 |
| −1 | 1.0233 | .8685 | 1.2098 | .8862 | 1.1097 | .9010 | 1.1474 | .7445 | 1.3471 | .7489 | 1.2407 | .8024 |
| 0 | 1.0222 | .8698 | 1.2210 | .8736 | 1.1063 | .9033 | 1.1332 | .7387 | 1.3554 | .7393 | 1.2449 | .7387 |
| 1 | 1.0166 | .8778 | 1.2392 | .8818 | 1.1033 | .9018 | 1.1576 | .7367 | 1.3815 | .7367 | 1.2523 | .7966 |
| 2 | 1.0152 | .8788 | 1.2157 | .8893 | 1.1009 | .9105 | 1.1446 | .7494 | 1.3346 | .7504 | 1.2343 | .8085 |
| 3 | 1.0197 | .8558 | 1.1522 | .8593 | 1.1166 | .8927 | 1.1356 | .7398 | 1.2779 | .7337 | 1.2314 | .8060 |

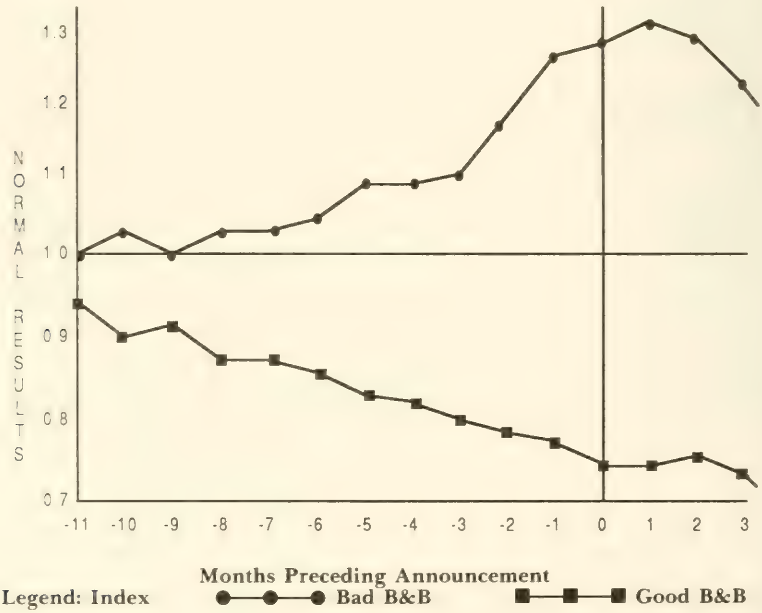
position criterion appeared to approximate aggregate market expectations most closely.

According to the assumptions made above, the following data were extracted from Exhibit 2.

**Model 2 (EPS, Sign)**
**B&B Index**

| Month | Good | Bad | $\chi^2$ |
|---|---|---|---|
| −11 | .9951 | .9351 | 1.93 |
| −10 | 1.0296 | .9005 | 1.42 |
| −9 | .9989 | .9138 | 1.47 |
| −8 | 1.0266 | .8670 | 3.32 |
| −7 | 1.0235 | .8652 | 0.17 |
| −6 | 1.0392 | .8581 | 0.06 |
| −5 | 1.0886 | .8246 | 1.42 |
| −4 | 1.0844 | .8182 | 0.28 |
| −3 | 1.1048 | .8004 | 0.11 |
| −2 | 1.1692 | .7735 | 2.88 |
| −1 | 1.2494 | .7633 | 3.93 |
| 0 | 1.2632 | .7421 | 0.01 |
| 1 | 1.2836 | .7450 | 0.42 |
| 2 | 1.2689 | .7470 | 0.53 |
| 3 | 1.2010 | .7299 | 0.02 |

A plot of these data follows.



If an investor had known annual accounting variables for the firms in the sample twelve months in advance of their release, and had purchased shares of the "good" companies, he or she could have realized an average return of 26.32 percent more than normally would have been expected. At the same time, the investor could have avoided making investments in the "bad" news companies which would have reduced his or her average yield to 25.79 (i.e., 1 − .7421) percent less than he or she normally would have expected.

To test the hypothesis of no relationship between the sign of the forecast error and the sign of the abnormal return, a two-by-two contingency table with one degree of freedom was used. The chi-square statistic values are presented here.

By looking first at the chi-square values presented, the first hypothesis of no relationship between the sign of the forecast error and the sign of the abnormal return cannot be rejected in most of the cases. Only in month −1 is the null hypothesis marginally rejected at the .05 level. At first glance, a tentative conclusion would be that the sign of the forecast error does not help to distinguish between those companies with positive abnormal returns and those with negative returns. But by looking at the values of the API or by looking at the plot, the first tentative conclusion seems contradictory. This is because the values of the API for the portfolio of "good" news indicate consistently better performance than the portfolio with "bad" news. The explanation of this apparent contradiction is that although there is no statistically significant relationship between the sign of the forecast error and the sign of the abnormal returns in most of the cases, the much better securities were indeed identified from the much worse securities.

This can be examined by testing the following hypothesis:

H: There is no relationship between the sign of the forecast error and the sign of the cumulative abnormal returns.

This hypothesis draws special attention to cross-sectional aggregation effects. The frequencies with which each expectation model assigned firms with positive cumulative abnormal returns to the "good" companies' portfolio, and firms with negative cumulative abnormal returns to the "bad" companies' portfolio, can be compared by looking at the chi-square values presented here:

| Month | Non-Cumulative | Cumulative |
|---|---|---|
| −11 | 1.93 | 1.93 |
| −10 | 1.42 | 2.52 |
| −9 | 1.47 | 0.01 |
| −8 | 3.32 | 2.52 |
| −7 | 0.17 | 0.35 |
| −6 | 0.06 | 1.19 |
| −5 | 1.42 | 0.35 |
| −4 | 0.28 | 1.19 |
| −3 | 0.11 | 1.19 |
| −2 | 2.88 | 2.52 |
| −1 | 3.93 | 6.68 |
| 0 | 0.01 | 6.68 |
| 1 | 0.42 | 9.51 |
| 2 | 0.53 | 4.35 |
| 3 | 0.02 | 4.35 |

In most of the cases, the chi-square statistics under the cumulative returns hypothesis are greater than under the first hypothesis. A two-by-two contingency table which summarizes data for each of the fifteen months is presented in Exhibit 4. That exhibit presents both the cumulative and non-cumulative returns for each accounting variable and for each expectation model.

**Exhibit 4. Summary of the Results of the Association between the Sign of the Forecast Error and the Sign of the Abnormal Returns**

| | | | Non-Cumulative returns | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Forecast Error | | | | Association of Signs % | $\chi^2$ | Significance Level |
| | | | $\geq 0$ | | $< 0$ | | | | |
| | | Expectation Model | $u_j \geq 0$ | $u_j < 0$ | $u_j < 0$ | $u_j \geq 0$ | | | |
| ACCOUNTING VARIABLE | Cash Flow | Model 1 | 371 | 349 | 201 | 129 | 54.48 | 14.03 | .01 |
| | | Model 2 | 337 | 323 | 227 | 163 | 53.71 | 8.44 | .01 |
| | | Model 3 | 216 | 204 | 346 | 284 | 53.52 | 4.07 | .05 |
| | EPS | Model 1 | 395 | 385 | 164 | 106 | 53.23 | 10.41 | .01 |
| | | Model 2 | 313 | 302 | 248 | 187 | 53.42 | 6.38 | .05 |
| | | Model 3 | 234 | 246 | 304 | 266 | 51.24 | 0.45 | >.05 |
| | | | Cumulative Returns | | | | | | |
| ACCOUNTING VARIABLE | Cash Flow | Model 1 | 395 | 325 | 277 | 53 | 64.00 | 139.26 | .001 |
| | | Model 2 | 349 | 311 | 290 | 100 | 60.86 | 74.31 | .001 |
| | | Model 3 | 215 | 205 | 397 | 233 | 58.29 | 20.79 | .001 |
| | EPS | Model 1 | 396 | 384 | 218 | 52 | 58.48 | 81.41 | .001 |
| | | Model 2 | 283 | 332 | 313 | 122 | 56.76 | 34.73 | .001 |
| | | Model 3 | 202 | 278 | 324 | 246 | 50.09 | 0.12 | >.10 |

The behavior of the API is not completely monotonic. In some cases, specifically in month −9 and months 2 and 3 for "good" companies, revision in the opposite direction occurred. A possible explanation of this behavior may be that the price of securities may initially increase (decrease) as a result of incomplete information which caused the market to over- (under-)react. Subsequently, as more complete information was gathered, an adjustment for such over- (under-)reaction was made.

It is also important to mention that the API starts rising and falling well in advance of the announcement date for the "good" and "bad" news portfolios, respectively. These results are consistent with an efficient market in which information is assimilated in anticipation of the announcement date, and stock prices are adjusted accordingly. This implies that other information is being publicly released, which allows investors to revise their predictions of accounting information. These competing sources of accounting numbers include quarterly accounting numbers, quarterly dividends, releases issued by market-newsletter services, and so on.

#### Other Combinations

Similar conclusions were obtained for the other possible combinations. The reader is invited to examine the results of the thirty-five other possible combinations as presented in exhibits 2 and 3.

#### Statistical Tests and Association Criterion

Exhibit 5 presents the Z(t) values for every month. The two dotted lines at $z = \pm 1.96$ indicate the 0.05 two-sided probability contours. That is, there is a less than 0.05 probability that the abnormal return will move beyond $\pm 1.96$. In all the fifteen months, the second hypothesis cannot be rejected, meaning that the unexpected returns are not statistically different from zero.

Exhibit 6 presents the Z(L) values for every month. In this case, the third hypothesis that cumulative abnormal returns are equal to zero is rejected at the .05 level in half of the months and marginally failed to reject the null hypothesis. This indicates that if an investor had invested in the whole sample an equal weight of 1/N dollars in each company and held this investment beyond month −3, the unexpected returns would not have been equal to zero. Therefore, ignoring any kind of financial information, an investor would

1. Earn no abnormal return if purchases and sales of securities occur in each month, and

**Exhibit 5. Z(t) Values for Firm Forecast Error**

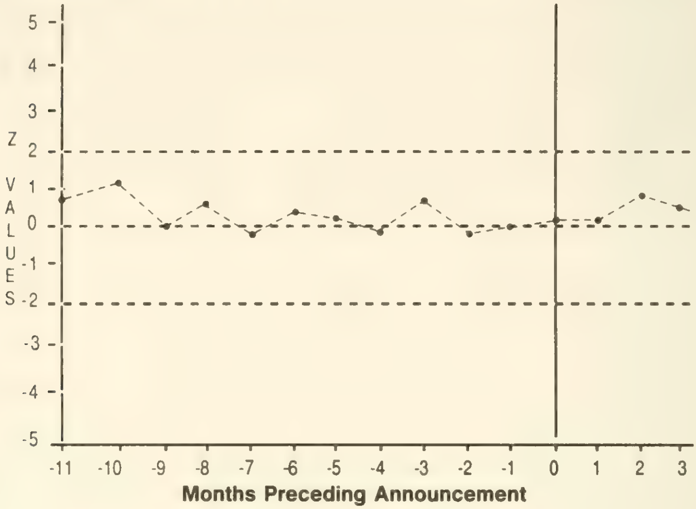
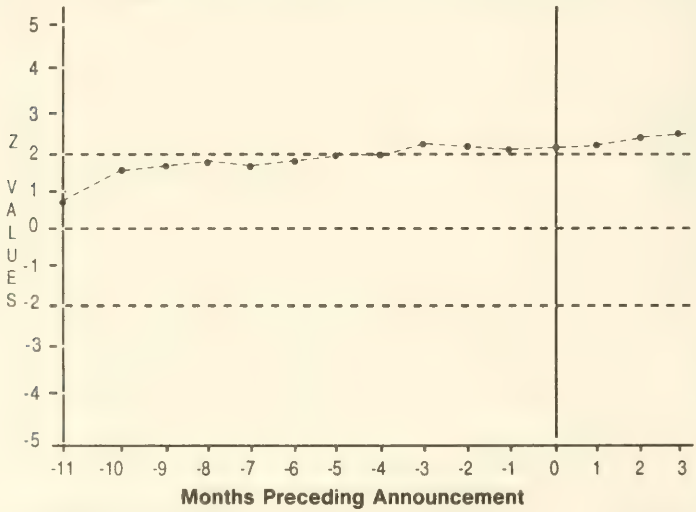



**Exhibit 6. Z(L) Values for Firm Forecast Error**



2. Earn an abnormal return (marginally) if securities were purchased in month −11 and held at least until month −3.

Another way to determine whether accounting numbers provide information is to determine whether unexpected returns would have been different had investors followed a strategy based on signals provided by accounting variables. The following section presents such an analysis.

### Z(L) Using Accounting Information

The Z(L) statistics obtained when portfolios were formed using signals from accounting variables (EPS and cash flow) are presented in Exhibit 7, a review of which indicates that in all cases, the portfolios formed of "good" companies have positive abnormal returns, which are statistically different from zero in all months. In the case of the portfolios formed of "bad" companies, the Z(L) behavior is different since the portfolios do not exhibit such long-range anticipatory adjustments, and in most cases, do not exceed the critical Z values until month −3.

These results seem to indicate that accounting numbers do convey informational content. In every case, the investors would be better off to follow a strategy based on signals provided by EPS and cash-flow numbers than to invest in the market portfolio (which ignores accounting numbers).

Determination of which expectation model and which accounting variables are most compatible with the one(s) used by the market has yet to be discussed. The next section attempts to accomplish this by using the association criterion.

### Association Criterion

This section relies on the association criterion to determine which model(s) best estimate(s) market-wide expectations. The results are based on API scores, as well as on Z(L) values.

If the conditions necessary for the API to serve as a model comparative measure are met,[12] the API scores indicate the relative association between the observable models of investor expectations and the unobservable expectations themselves. Consequently, the API scores may indicate which of the three expectation models used in this study approximates market expectations of accounting numbers.

Since there are two criteria to determine which models are the

[12] James Patell has developed the necessary conditions under which this criterion can be rightfully applied. See Patell, "The API and the Design of Experiments," *Journal of Accounting Research* (Autumn 1979), 528-49.

**Exhibit 7. Z(L) Statistics for Good and Bad Companies (Model 1, 2, and 3 according to Sign and Magnitude)**

| Month relative to annual report announcement date | Sign | | | | Magnitude | | | |
|---|---|---|---|---|---|---|---|---|
| | Cash Flow | | EPS | | Cash Flow | | EPS | |
| | Good | Bad | Good | Bad | Good | Bad | Good | Bad |
| Model 1 | | | | | | | | |
| −11 | 2.1668 | −1.752 | 1.9009 | −1.849 | 1.4376 | −0.371 | 0.8353 | 0.191 |
| −10 | 3.7201 | −2.474 | 3.0220 | −2.126 | 3.6019 | −1.289 | 1.2341 | 0.069 |
| −9 | 2.9046 | −1.303 | 2.8236 | −1.726 | 3.0088 | −0.684 | 2.6565 | −0.417 |
| −8 | 3.6463 | −1.824 | 3.7857 | −2.809 | 4.0886 | −1.311 | 3.1300 | −0.474 |
| −7 | 3.7434 | −2.124 | 3.8531 | −3.122 | 4.3063 | −1.655 | 3.0929 | −0.576 |
| −6 | 4.2081 | −2.549 | 4.3534 | −3.738 | 4.8952 | −2.042 | 3.0917 | −0.394 |
| −5 | 3.9495 | −2.111 | 4.0206 | −3.063 | 4.3347 | −1.440 | 2.6502 | 0.117 |
| −4 | 4.2938 | −2.630 | 4.3173 | −3.632 | 4.5850 | −1.715 | 3.0730 | −0.344 |
| −3 | 4.5117 | −2.563 | 4.5162 | −3.544 | 4.9101 | −1.728 | 2.8551 | 0.181 |
| −2 | 4.5346 | −2.728 | 4.5143 | −3.698 | 4.9767 | −1.900 | 2.9576 | −0.033 |
| −1 | 5.1392 | −3.560 | 4.9895 | −4.522 | 5.5528 | −2.450 | 3.3693 | −0.444 |
| 0 | 5.1266 | −3.457 | 4.9927 | −4.427 | 5.6500 | −2.474 | 3.4696 | −0.474 |
| 1 | 5.3249 | −3.684 | 5.1261 | −4.603 | 5.8422 | −2.620 | 3.7661 | −0.733 |
| 2 | 5.4482 | −3.493 | 5.2970 | −4.476 | 5.7306 | −2.219 | 3.7059 | −0.372 |
| 3 | 5.5755 | −3.425 | 5.5404 | −4.612 | 5.3687 | −1.674 | 3.1673 | 0.372 |
| Model 2 | | | | | | | | |
| −11 | 1.7371 | −1.017 | 2.0132 | −1.246 | 0.9639 | 0.085 | 2.3808 | −1.403 |
| −10 | 3.2458 | −1.575 | 3.6717 | −1.909 | 2.9826 | −0.602 | 4.6430 | −2.531 |
| −9 | 2.9500 | −1.159 | 3.4059 | −1.555 | 1.6025 | −0.288 | 4.7246 | −2.576 |
| −8 | 3.836 | −1.800 | 4.2521 | −2.095 | 3.6744 | −0.903 | 6.6180 | −3.072 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| −7 | 3.832 | −1.953 | 4.0880 | −2.053 | 3.8988 | −1.252 | 5.5003 | −3.091 |
| −6 | 4.5078 | −2.598 | 4.4325 | −2.262 | 4.5092 | −1.659 | 5.9823 | −3.403 |
| −5 | 5.1263 | −3.300 | 4.9954 | −2.851 | 4.3630 | −1.454 | 5.7011 | −3.046 |
| −4 | 5.3121 | −3.575 | 5.2892 | −3.237 | 4.3165 | −1.445 | 5.7385 | −3.122 |
| −3 | 3.3937 | −3.330 | 5.3648 | −2.992 | 4.6766 | −1.490 | 6.0359 | −3.117 |
| −2 | 5.5978 | −3.713 | 5.5901 | −3.378 | 4.8327 | −1.747 | 6.1463 | −3.343 |
| −1 | 6.1226 | −4.371 | 5.9560 | −3.806 | 5.3422 | −2.231 | 6.4948 | −3.699 |
| 0 | 6.2583 | −4.461 | 6.1107 | −3.910 | 5.4000 | −2.217 | 6.6146 | −3.750 |
| 1 | 6.4711 | −4.684 | 6.2499 | −4.031 | 5.6539 | −2.421 | 6.7819 | −3.882 |
| 2 | 6.6940 | −4.624 | 6.3629 | −3.837 | 5.5205 | −2.000 | 6.9252 | −3.726 |
| 3 | 6.4569 | −4.096 | 6.3174 | −3.563 | 5.2622 | −1.557 | 6.5171 | −3.101 |
| | | | | Model 3 | | | | |
| −11 | −0.0266 | 0.948 | 0.5700 | 0.464 | 1.5467 | −0.490 | 1.4991 | −0.460 |
| −10 | 2.3874 | 0.102 | 1.5171 | .0729 | 3.0363 | −0.775 | 2.4945 | −0.271 |
| −9 | 1.7569 | 0.635 | 1.8223 | 0.487 | 2.8723 | −0.578 | 2.3379 | −0.078 |
| −8 | 2.8846 | 0.119 | 2.5567 | 0.215 | 4.0732 | −1.335 | 3.1337 | −0.451 |
| −7 | 2.7285 | 0.118 | 2.0790 | 0.519 | 4.0423 | −1.441 | 2.7072 | −0.167 |
| −6 | 3.2188 | −0.106 | 2.2321 | 0.552 | 4.6539 | −1.858 | 2.9873 | −0.264 |
| −5 | 4.4020 | −0.982 | 2.8224 | 0.077 | 5.6059 | −2.717 | 3.6954 | −0.898 |
| −4 | 4.2557 | −0.900 | 2.6590 | 0.191 | 5.5380 | −2.687 | 3.9471 | −1.183 |
| −3 | 4.3763 | −0.719 | 2.9006 | 0.264 | 5.8915 | −2.730 | 3.9327 | −0.865 |
| −2 | 4.5855 | −0.985 | 3.0061 | 0.061 | 6.2650 | −3.202 | 4.1476 | −1.188 |
| −1 | 5.0116 | −1.320 | 3.1210 | −0.042 | 6.7768 | −3.698 | 4.3678 | −1.403 |
| 0 | 5.1314 | −1.351 | 3.1516 | −0.002 | 6.9443 | −3.791 | 4.3999 | −1.364 |
| 1 | 5.2451 | −1.405 | 3.2043 | −0.012 | 7.1599 | −3.962 | 4.4809 | −1.406 |
| 2 | 5.1563 | −1.065 | 3.3374 | 0.153 | 7.0017 | −3.512 | 4.5463 | −1.172 |
| 3 | 5.2002 | −0.917 | 3.1069 | 0.557 | 7.0432 | −3.353 | 4.7007 | −1.124 |

ones that more accurately estimated market-wide expectations, no combination was found to be consistently superior. Model 2 may be considered to be the best performer since it did well in both API scores and Z(L) values for both accounting variables (however, EPS performs slightly better than does cash flow).

Some methods that did well in the API scores did not do well in Z(L) values. In the case of the portfolios formed of "bad" news companies, Z(L) values were not significantly different from zero in six different combinations in most of the months. This apparent contradiction lies in the definition of the indexes and Z(L). As constructed, the indexes are not affected when abnormal returns are equal to zero (this does not hold for the Pettit index). The addition of another month for which the abnormal return is zero does not change the API's scores. But this does not hold for the Z(L) measure, which contains $\sqrt{L}$ in the denominator. The addition of a month for which the abnormal return is equal to zero decreases the value of Z(L), making it more difficult to reject the null hypothesis that $E(u_{jt}) = 0$.

## CONCLUSIONS

Despite the Mexican Stock Exchange being a volatile market, it seems that EPS and cash-flow data allowed investors to discriminate between those companies with large abnormal positive returns from those with large abnormal negative returns. Consequently, it seems that accounting variables do possess information content for investing in securities listed on the MSE.

A by-product of this research was the determination of the forecast model which best approximates market expectations. While all three performed well, the best performer was the model in which the forecast variable was assumed to change by the same absolute magnitude of the prior year's change.

The results of this study tend to contradict the conventional wisdom that would suggest that capital markets in developing countries are somewhat naive, that is, inefficient. Many structural differences exist between the U.S. and Mexican capital markets which would suggest differences in accounting information content. However, these apparently do not cause information content differences. Additional research is needed to provide empirical insight into the apparent paradox.

**SELECTED BIBLIOGRAPHY**


Agilizacion Bursatil, *Expansion* (18 February 1976), 46-48.

"Ahora Es Cuando, . . ." Informe Especial, *Expansion* (13 November 1980), 86-105.

Anderson, James A. "Some Limitations of Efficient Markets Research for the Determination of Financial Reporting Standards." *Abacus* (June 1975), 18-36.

Bacon, Leonard. "An Exploratory Study of the Role of Financial Disclosure of Accounting Data in the Development of the Stock Exchange and Capital Growth in Mexico City." Ph.D. dissertation, University of Mississippi, 1973.

Ball, Ray. "Changes in Accounting Techniques and Stock Prices." *Empirical Studies in Accounting: Selected Studies." Journal of Accounting Research* (Supplement 1972), 1-44.

______ and Phillip Brown. "An Empirical Evaluation of Accounting Income Numbers." *Journal of Accounting Research* (Autumn 1968), 159-78.

Beaver, William H. "The Information Content of Annual Earnings Announcements." *Empirical Research in Accounting: Selected Studies 1968*, supplement, *Journal of Accounting Research*, 67-92.

______. "Market Efficiency." *Accounting Review* (January 1981), 23-37.

______. "The Behavior of Security Prices and Its Implications for Accounting Research (Methods)." Committee Reports, *Accounting Review* (Supplement 1972), 87-92.

______. *Financial Reporting: An Accounting Revolution.* Contemporary Topics in Accounting Series. Englewood Cliffs, N.J.: Prentice-Hall, 1981.

______. "Current Trends in Corporate Disclosure." *Journal of Accountancy* (January 1978), 44-52.

______ and Roland E. Dukes. "Interperiod Tax Allocation, Earnings Expectation and the Behavior of Security Prices." *Accounting Review* (July 1973), 320-32.

______, Roger Clarke, and William F. Wright. "The Association between Unsystematic Security Returns and the Magnitude of Earnings Forecast Errors." *Journal of Accounting Research* (Autumn 1979), 316-40.

Brothers, Dwight S. and Leopoldo M. Solis. *Mexican Financial Development.* Austin, Texas: University of Texas Press, 1966.

Brown, Philip. "The Impact of the Annual Net Profit Report on the Stock Market." *Australian Accountant* (July 1970), 277-83.

______ and John W. Kennelly. "The Information Content of Quarterly Earnings." *Journal of Business* (July 1972), 402-21.

______ and Ray Ball. "Some Preliminary Findings on the Association between Earnings of a Firm, Its Industry, and the Economy." *Empirical Research in Accounting: 1967*, supplement to *Journal of Accounting Research*, vol. 5 (1967), 55-77.

Collegnon-Orozco, Mario, Ismael Diaz-Samudio, and Jose Manuel Gomez-Gil. "El Ejecutivo de Finanzas y el Mercado Accionario Mexicano." *Ejecutivos de Finanzas* (February 1976), 18-24.

Fama, Eugene F. "Efficrent Capital Markets: A Review of Theory and Empirical Work." *Journal of Finance* (May 1970), 383-417.

———, L. Fisher, and R. Roll. "The Adjustment of Stock Prices to New Information." *International Economic Review* (February 1969), 1-21.

Gonedes, N. J. and Nicholas Dopuch. "Capital Market Equilibrium, Information Production, and Selecting Accounting Techniques: Theoretical Framework and Review of Empirical Work." *Studies on Financial Objectives, 1974, Journal of Accounting Research* (Supplement 1974), 48-129.

King, Benjamin F. "Market and Industry Factors in Stock Price Behavior." *Journal of Business*, supplement (January 1966), 139-90.

"La Bolsa se Moderniza." *Expansion* (30 March 1977), 36-41.

"Las Bolsas se Unen." *Expansion* (14 January 1976), 10-11, 15.

Marshall, R. "Interpreting the API." *Accounting Review* (January 1975), 99-111.

Ohlson, James A. "Residual (API) Analysis and the Private Value of Information." *Journal of Accounting Research* (Autumn 1979), 506-527.

——— and James M. Patell. "An Introduction to Residual (API) Analysis and the Private Value of Information and the API and the Design of Experiments." *Journal of Accounting Research* (Autumn 1979), 504-5.

Patell, James M. "The API and the Design of Experiments." *Journal of Accounting Research* (Autumn 1979), 528-49.

———. "Corporate Earnings Forecasts: Empirical Tests and Consumption-Investment Model." Ph.D. dissertation, Carnegie-Mellon University, 1976.

———. "Corporate Forecasts of Earnings per Share and Stock Price Behavior: Empirical Tests." *Journal of Accounting Research* (Autumn 1976), 246-76.

Petricioli, Gustavo. "Antecedentes y Perspectivas del Mercado de Valores." *Ejecutivos de Finanzas*, Ano VIII, no.5.

———. Perspectivas Inmediatas y a Corto Plado del Mercado de Valores." *Ejecutivos de Finanzas* (March 1981), 14-21.

Pettit, R. Richardson. "Divident Announcements, Security Performance, and Capital Market Efficiency." *Journal of Finance* (December 1972), 993-1007.

——— and Randolph Westerfield. "Using the Capital Asset Pricing Model and the Market Model to Predict Security Returns." *Journal of Financial and Quantitative Analysis* (September 1974), 579-605.

Wai, U Tun and H. T. Patrick. "Stock and Bond Issues and Capital Markets in Less Developed Countries." International Monetary Fund Staff Papers (March 1973).

# *Qualification Requirements for Public Accounting in Selected Foreign Countries: A Comparison with the United States*

PATRICK H. HEASTON*

The authority to establish and administer the qualifications for the license to practice as a certified public accountant (CPA) is exercised by fifty-four separate jurisdictions within the United States and its possessions. This is the result of a conscious effort by the profession in this country from early in its existence to seek professional accreditation under state law rather than from a private, professional society — a choice consistent with the accreditation of other U.S. professions.[1]

As as result of this dispersion of authority, the qualification requirements are quite variable from jurisdiction to jurisdiction in the United States. A baccalaureate degree in accounting or its equivalent is the predominant education requirement; however, thirteen jurisdictions do not require that a candidate with a baccalaureate have a concentration in accounting, and fifteen jurisdictions still accept less than a baccalaureate degree. At the other end of the spectrum, three jurisdictions (Hawaii, Florida, and Utah) now or soon will require a baccalaureate degree plus thirty hours of additional study, including at some point in the program a concentration in accounting. Experience is a significant component of qualification for licensure in some jurisdictions and plays no part in others. The great majority of jurisdictions require

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[1] John L. Carey, *The Rise of the Accounting Profession*, vol. 1 (New York: American Institute of Certified Public Accountants, 1969), 315.

some experience, but the duration and character of acceptable experience is quite variable, ranging from one to three years for baccalaureate degree candidates and including various combinations of public, government, and industry accounting experience. Some jurisdictions require substantial auditing experience in public accounting while others permit a wide range of accounting experience in a number of accounting work environments.

Both the American Institute of Certified Public Accountants (AICPA) and the National Association of State Boards of Accountancy (NASBA) have long worked for uniformity among the jurisdictions; however, even these two organizations are not in complete agreement on the qualification requirements which they propose. The official position of the AICPA is embodied in the *Report of the Committee on Education and Experience Requirements for CPAs* (Beamer Report). The committee recommended five years of college study (now expressed as a baccalaureate degree plus thirty hours of additional study) and elimination of an experience requirement.[2] The latter recommendation did not reflect an attitude that experience is not valuable but rather a perception that uniform standards for experience cannot be established or policed. The NASBA also proposes a comparable education requirement but retains a one-year experience requirement with significant audit exposure for candidates meeting such an education requirement.[3] Significantly, the AICPA makes no distinction between the award of the CPA certificate and the license to practice for candidates completing the education requirement and passing the CPA examination, while the NASBA proposes award of the certificate upon completion of education and the examination, but awards the license to practice only after completion of appropriate experience. This difference concerning an experience requirement has not been reconciled in the recently published *Model Accountancy Bill* prepared by a joint AICPA-NASBA committee. The bill offers an experience requirement as optional.[4]

With the idea that the goal of uniformity and the quality of any qualification requirements might benefit from comparison of the

[2] Elmer G. Beamer, chairman, *Report of the Committee on Education and Experience Requirements for CPAs* (New York: American Institute of Certified Public Accountants, 1969), 7.

[3] National Association of State Boards of Accountancy, *Model Public Accountancy Act* (New York: National Association of State Boards of Accountancy, 1980), 41, 49.

[4] AICPA-NASBA Special Committee on Model Accountancy Bill, *Model Public Accountancy Bill* (American Institute of Certified Public Accountants and National Association of State Boards of Accountancy, 1984), section 6, 24-28.

U.S. requirements with those in other countries, sixty-six foreign accounting societies which are members of the International Federation of Accountants were surveyed in the latter half of 1981 concerning their qualifications for admission to the profession of public accounting. Forty-four societies (65 percent) responded, and thirty-nine (59 percent) provided sufficient information to categorize their qualification processes.

The societies responded in a variety of forms. Many provided the requested information through a letter response; some forwarded copies of printed materials, such as society by-laws or student handbooks; still others (in Europe) forwarded copies of joint studies conducted with the Institute of Chartered Accountants in England and Wales, which addressed the question of qualification requirements. This information is summarized in Exhibit 1.

**SOCIETY CONTROL**

The major reason for the lack of uniformity in the United States is the state and territorial government control of licensure within a federal government system. This is not a problem anywhere else in the world, although government regulation of certain accounting services and/or the accounting profession in some form seems a universal reality.

Government regulation ranges from indirect influence on the qualification process to direct licensure of professional accountants. In a number of countries, the professional society controls the qualification process, and the only government influence involves the restriction of certain accounting services to society members. Commonly, statutory audits are required of certain firms, and society members alone can perform such audits. The reviseur d'enterprises in Belgium is an example of a statutory auditor.[5] In other countries, the government has delegated its authority for regulation of the profession to the professional accounting organization. In Japan, for example, the Ministry of Finance has the authority to regulate the profession but has delegated much of this to the Institute of CPAs.[6] In other countries, the government directly licenses public accountants but the accounting organization is recognized by government departments as representative of the profession and, therefore, is consulted in matters pertinent to the

[5] Anglo-Belgian Liaison Committee, *Requirements for Qualification as a reviseur d'enterprises in Belgium* (London: Institute of Chartered Accountants in England and Wales, 1977), 1-2.

[6] Japanese Institute of Certified Public Accountants, *CPA Profession in Japan* (Tokyo: JICPA, 1979), 17.

**Exhibit 1. Education and Experience Requirements for Admission to the Profession of Public Accountancy, by Country**

| Country | Professional designation or society | Education | | | Experience (in years) | | | |
|---|---|---|---|---|---|---|---|---|
| | | Less than baccalaureate | Baccalaureate | Advanced study | Public | Govern-ment | Private industry | Teaching |
| Australia | Chartered accountant | Technical college | Accounting | Mandatory institute seminars | 3 | na | na | na |
| Belgium | Expert comptable | Technical college | Economics<br>Finance<br>Commerce<br>Business | Mandatory institute seminars | 3 | na | 3 | na |
| Belgium[1] | Reviseur d'entreprises | Technical college | Economics<br>Commerce<br>Act. science<br>Business<br>and others | Voluntary institute seminars | 3 | na | na | na |
| Brazil[2] | Instituto dos auditores independentes | no | Accounting | None | 3 or 5 | na | na | na |
| Bermuda | Chartered accountant | no | Accounting or equivalent | Mandatory institute seminars | 3 | na | na | na |
| Canada | Chartered accountant | no | Accounting or equivalent | Mandatory institute seminars | 3 | na | na | na |
| Colombia | Contador publico | no | Accounting | None | 1 | na | na | na |
| Denmark[3] | Statsatoriseret revisor | no | 2 degree levels (5 year program) | Voluntary institute seminars | 2 | 2 | 2 | na |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Dominican Republic | Contador publico autorizado | no | Accounting | none | none | none | none | none |
| France[4] | Expert comptable | no | 3 degree levels (exceeds baccalaureate requirement) | Mandatory seminars | 3 | na | see footnote 4 | na |
| Greece | Certified public accountant | no | Economics school U. of Greece | Mandatory seminars | 11 | na | na | na |
| Hong Kong[5] | Certified public accountant | Technical college & 5 exams | University degree & 3 exams | None | 4 | 3 or 5+ | 3 or 5+ (+2½ in public practice) | na |
| Iceland | Loggiltur endurskodandi | no | Accounting | None | 3 | na | na | na |
| India[6] | Chartered accountant | Pass entrance exam of institute | Any degree except fine arts | Mandatory institute study program | 3 or 4 | na | 1 | na |
| Indonesia | Institute of Accountants | no | Accounting | None | None | None | None | |
| Israel[7] | Certified public accountant | Equivalency exam in accounting subjects | Accounting | None | 2 | 2 | 2 | na |
| Japan[8] | Certified public accountant | Pass entrance and intermediate exams of institute | Accounting | Mandatory year of study | 2 | na | na | na |

**Exhibit 1. Education and Experience Requirements for Admission to the Profession of Public Accountancy, by Country (continued)**

| | | Education | | | Experience (in years) | | | |
|---|---|---|---|---|---|---|---|---|
| Country | Professional designation or society | Less than baccalaureate | Baccalaureate | Advanced study | Public | Govern-ment | Private industry | Teaching |
| Kenya | Certified public accountant | Secondary school | not required | None | Experience judged on individual basis | | | |
| Lebanon[9] | Middle East Society of Associated Accountants | Secondary School & preliminary exam | Accounting Commerce Bus Admin. | None | 3 or 5 | na | 3 or 5 | see footnote 9 |
| Luxembourg | Expert comptable | no | Accounting Economics Finance Commerce | None | 3 | 2+ (+1 in public practice) | 2+ (+1 in public practice) | na |
| Malaysia[10] | Certified public accountant | Foundation exam | Accounting | none | 4 or 5 | 3 or 4+ (+2 in public practice) | 3 or 4+ (+2 in public practice) | na |
| Netherlands[11] | Register-accountant | Institute courses (approx. 8 years) | Business Economics | 2½ yrs post graduate course | See footnote 11 | na | na | na |
| New Zealand[12] | Chartered accountant | Secondary & pass professional exam | Accounting | none | 3 or 5 | 3 or 5+ (+2 in public practice) | 3 or 5+ (+2 in public practice) | na |
| Norway[13] | Statsautorisert revisor) | Qualified registered auditor (registrert revisor) | Commerce Social & political economics | Advanced auditing studies at university | 2 | 2 | na | na |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Pakistan[14] | Chartered accountant | no | University degree | Mandatory correspondence course | 3-6 | na | na | na |
| Panama | Contador pub-lico autorizado | no | Accounting (5-yr. program) | none | none | none | none | none |
| Paraguay | Auditores y consultores asociados | no | University degree | none | none | none | none | none |
| Philippines | Certified public accountant | no | Commerce | none | none | none | none | none |
| Scotland[15] | Chartered accountant | Technical college | Accounting or equivalent | Mandatory institute courses | 3 or 4 | na | na | na |
| Singapore[16] | Society of accountants | Technical college | Accounting | none | 3 or 5 | na | na | na |
| South Africa[17] | Chartered accountant | no | Certificate in theory of accountancy (exceeds baccalaureate requirement) | none | 3-5 | na | na | na |
| Sweden | Auktorisade revisor | no | Accounting or equivalent | Voluntary institute seminars | 5 | 2+ (3+ in public) | 2+ | na |
| Switzerland | Bücher-experten | Equivalency examination or Federal Book-keepers diploma and exam | Equivalent of masters degree in business, economics or law | none | 7 yrs. in commercial practice (4 in public) | | | na |

**Exhibit 1. Education and Experience Requirements for Admission to the Profession of Public Accountancy, by Country (continued)**

| | | Education | | | Experience (in years) | | | |
|---|---|---|---|---|---|---|---|---|
| Country | Professional designation or society | Less than baccalaureate | Baccalaureate | Advanced study | Public | Govern- ment | Private industry | Teaching |
| Trinadad-Tobago[15] | Chartered accountant | Secondary & examination or technical college | Accounting or equivivlent | none | 3-5 | 3-5 | 3-5 | na |
| Turkey | Expert accountant | no | Degrees with courses in: accounting economics commerce finance | none | 2 | na | na | na |
| United Kingdom[15] | Chartered accountant | Secondary & foundation course or technical college with equivalent | Accounting or equivalent, or University degree and foundation exam | none | 3 or 4 | na | na | na |
| Venezuela | Contador publico | no | Accounting | none | none | none | none | none |
| West Germany | Wirtschaft-sprüfer | Secondary & 10 years' experience, technical college & experience | Economics Political economics & others | Voluntary institute seminars | 5 | 3+ (+2 in public) | 3+ | na |
| Zimbabwe[17] | Chartered accountant | no | Accounting or equivalent | none | 3-5 | na | na | na |

**Source:** Direct communication with accounting societies in the countries, and publications of these societies.
na: Experience from this source is not acceptable.

[1] Belgium: Certain statutory audits may be performed by a reviseur d'enterprises, who may not provide other accounting services to such an audit client.

[2] Brazil: Three years' experience with completion of the professional examination, five years without.

[3] Denmark: Experience in government and private industry must be in auditing.

[4] France: The candidate may spend a limited time in private industry working for a firm audited by his or her matre d'stage or adviser.

[5] Hong Kong: The professional society accepts members with three years' (university degree) or five years' (technical college degree) experience in public practice, government, or industry; however, a certificate to practice public accounting is reserved for those with public experience. At least four years of public experience or two and one-half years of public experience after qualification as a member of the society (for non-public members) are required for a practicing certificate.

[6] India: Three years for articled clerks, four years for audit clerks. Audit clerks differ from articled clerks primarily with regard to remuneration, with audit clerks receiving substantially more. One year of experience can be in industry; the choice is optional.

[7] Israel: Government experience must be with the central bank or the state comptroller. Industry experience must be with a banking institution.

[8] Japan: Advanced year of training may be at an approved educational institution or under the direction of a trainer approved by the Ministry of Finance.

[9] Lebanon: Three years of experience is required of baccalaureate degree candidates, five years for any candidates with less education. No more than two members of the faculty of approved universities or colleges are accepted as fellows of the society.

[10] Malaysia: The professional society accepts members with three years' (university or technical college degree) or four years' (secondary school) experience in public practice, government or industry; however, a certificate to practice public accounting is reserved for those with public experience. Society membership plus one year of public experience or plus two years of public experience (for those with none) is required for a practicing certificate.

[11] Netherlands: Experience is not required; however, candidates with a baccalaureate are in fact employed by practitioners while completing the postgraduate course, and candidates seeking qualification through institute courses are employed by practitioners throughout this period of time.

[12] New Zealand: The professional society accepts members with three years' (baccalaureate in accounting) or five years' experience in public practice, government or industry; however, a certificate to practice public accounting is reserved for those with public experience. Society membership for two years and two and one-half years of public experience are required for the practicing certificate.

[13] Norway: Government service is restricted to tax and audit offices.

[14] Pakistan: Length of practical experience is dependent on the nature of the university degree. A baccalaureate in accounting would require three years of experience.

[15] Scotland, Trinidad, United Kingdom: Length of experience is dependent on educational background. A baccalaureate in accounting would require three years of experience.

[16] Singapore: The experience requirement is public accounting experience of three years after satisfying the education requirement or five years in total.

[17] South Africa, Zimbabwe: If experience is undertaken at the completion of the degree, the requirement is three years. The requirement can be as much as five years if the degree is in progress.

profession. Of all the countries surveyed, West Germany seems most similar to the United States in political structure. It too has a federal system, and the individual states regulated the accounting profession until 1961. At that time, a federal regulatory body, which has a membership equivalent to that of the AICPA, was created. The Federal Ministry of Economics is responsible for this regulatory body, but its supervision is limited to ensuring compliance with the statutory authority.[7]

Importantly, regardless of the nature and extent of regulation, there is a single, uniform qualification process within other countries throughout the world. The accounting society is normally a direct participant in this process, unlike the AICPA and state accounting societies in the United States, which advise and lobby state legislators concerning qualification standards.

## EDUCATION

It would be presumptuous to attempt to evaluate the efficacy of the educational process of one country relative to another. There are too many qualitative factors incapable of measurement to consider. One can at least sense the extent of academic preparation in the context of the other elements of the qualification process from the information provided by the accounting societies. In some cases, a detailed syllabus, which offered some basis for judgment, was provided.

The experience in the United States has evolved from an emphasis solely on practical experience to more formal education as a preparation for the profession. The education requirements have been upgraded over time to the point that a baccalaureate degree with a concentration in accounting is the general prerequisite. This same phenomenon appears in other countries. As Exhibit 1 indicates, twenty of the societies surveyed will accept nothing less than a baccalaureate degree as minimum academic preparation. An accounting major is clearly indicated in eleven of these countries but appears to be the fact in at least several more. Denmark and France have multiple degree levels which lead to an equivalent of an accounting major; Greece and the Philippines have a professional examination covering accounting and related subjects which is taken upon completion of the degree; Turkey requires accounting courses as a part of its curriculum.

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[7] Institute of Chartered Accountants in England and Wales and Institut der Wirtschaftsprüfer in Deutschland e.V., *Requirements for Qualifications as a Wirtschaftsprüfer in the Federal Republic of Germany*, 3d. ed. (London: Institute of Chartered Accountants in England and Wales, 1980), 1-2.

Of the twenty countries that set a baccalaureate degree as a minimum, South Africa perhaps most clearly involves the profession in formal education. The course content for the Certificate in the Theory of Accountancy is approved by the Public Accountants' and Auditors Board, and professional accountants work closely with the universities. In a letter to the author, K. G. Mockler, executive director of the South African Institute of Chartered Accountants, described the relationship of the profession to education:

> Representatives of the Institute serve in an advisory capacity to the recognized universities. In addition, at some of the universities members of the profession act as external examiners in accounting and related subjects. Representatives from universities serve on the Public Accountants' and Auditors' Board and on the Board's Education Committee. The profession, therefore, not only maintains close relations with the universities but also some control over the content of the courses presented and examination standards.
>
> The profession, through the Board, augments the salaries of lecturers and professors in accounting and auditing in order to encourage Chartered Accountants to take teaching positions at the universities.

Though the remaining countries will accept less, many candidates do have a baccalaureate, and most of these countries still apparently require formal accounting education of some depth and breadth. Similarities among these countries yield some natural groupings: the Netherlands and Norway accept some variety of educational background but require advanced accounting and auditing studies at the University; New Zealand and Singapore may exempt candidates with a baccalaureate in accounting from examination in certain subjects but will require an examination testing equivalent knowledge for nongraduates; Israel requires an examination of equivalent knowledge for nongraduates in addition to the professional examination; Australia, Belgium (expert comptable), Japan, Scotland, and the United Kingdom require either a diploma from a technical college with a strong accounting curriculum defined or passing an examination of the equivalent knowledge; Belgium (reviseur d'enterprises), Hong Kong, India, and Malaysia offer a series of academic examinations that parallel the baccalaureate preparation; West Germany accepts candidates with a variety of backgrounds and relies on its professional examination to ensure that candidates obtain the necessary academic preparation; Lebanon, Trinidad, and Venezuela indicate a clear commitment to higher education, but the information received was minimal; Kenya

is the only country without educational standards beyond secondary school.

Another element of education to consider is advanced study beyond the baccalaureate available in some countries. Sufficient information in many countries was not available to determine whether academic programs equivalent to the five-year requirement proposed in the United States exist. Panama has a five-year accounting program. The Netherlands, France, and Switzerland apparently require lengthy academic preparation. The seminars in Belgium (reviseur d'enterprises) and the courses in India and Pakistan appear also to impart primarily academic knowledge. Seminars in the remaining countries, however, are provided by the professional societies and are expressly designed to integrate academic knowledge with practice. A condition of acceptance to the seminars is a position in public practice. The courses are typically taught by practicing professionals and include lectures, discussions, and written case studies intended to build on academic knowledge and require its application in practice situations.

These seminars appear to be more than the equivalent of staff training courses offered by many firms in the United States for new staff. The purpose is to prepare an individual who is competent in practice at the time of licensure, not to prepare an individual who is competent to enter practice. The direct control of the professional society and the simultaneous practical training over some period of time emphasize this purpose.

This is a distinctly different approach to advanced education than that advocated in the United States. The advanced formal education proposed by the AICPA and NASBA relies upon the academic community to provide the education. This is premised on a conclusion that five years are necessary to impart adequate academic preparation to enter practice. The profession in the United States makes no attempt to integrate advanced education formally with practice to obtain competence in practice.

## EXPERIENCE

The experience requirements listed in Exhibit 1 indicate that the duration of experience outside the United States is variable but generally longer. A three-year requirement is rare in the United States but is common in other countries. A few countries have particularly lengthy requirements: Greece requires a progression through three levels over an eleven-year period before full membership in the society is granted; Switzerland requires seven years

of experience, of which four must be in public practice; West Germany requires five years of experience, at least two of which must be in public practice.

A greater homogeneity also exists among the foreign accounting societies as to the source of acceptable accounting experience. Experience outside public accounting is rarely acceptable. Denmark, Norway, Israel, and Belgium (expert comptable) are the only countries to accept nonpublic experience exclusively as sufficient for admission; all impose some restrictions: Denmark specifies the work must involve internal auditing; Noway restricts government service to tax or audit offices; Israel restricts the experience to certain types of government and business entities; Belgium restricts the experience to private industry only. This is consistent with the role of the expert comptable in Belgium. The reviseur d'enterprises alone can conduct statutory audits, and his practice is restricted to this activity. The expert comptable, on the other hand, is more a business consultant, so industry experience seems appropriate. This experience is also under the close supervision of a member of the society in public practice.

Several other countries (Luxembourg, Malaysia, Sweden, Switzerland, and West Germany) accept nonpublic experience as a portion of the required experience. Luxembourg requires only one year of public exposure, but the remaining societies require from two to four years of public experience. France and India also allow some private-industry experience, but it is optional, for a limited period of time, and under the close supervision of a society member.

The restriction of acceptable experience primarily to public accounting outside the United States is probably due to the control of the accounting society over admission to the profession. Formal or informal delegation or regulation of the profession by government has insulated the qualifications process from the political pressures received in the United States, where numbers of state legislatures wrestle with standards in a political climate. As a result, the problem of experience definition does not appear to exist in the United States. "Equivalence" is not a problem. Experience must still be defined, but the accounting profession has developed to service the particular needs of each country's economic environment under the control of the profession itself. The result is practical experience closely allied to those needs.

The countries that do not require experience have some interesting similarities. All of them, for example, require a degree in

accounting or its equivalent as a minimum education requirement. In addition, all of them have developing economies with accounting professions which are in a state of development.

In contrast, the economies that are most advanced and have the most established accounting professions, Western Europe, Japan, and some British Commonwealth members, appear to require experience as an important component of the qualification process. Certainly, the presence of an experience requirement has its origin in the past when practical experience earned through a formal principal-clerk relationship was the primary means of acquiring the necessary knowledge for qualification for the profession. As the emphasis on formal education has evolved in these countries and the education requirement has been upgraded, however, a significant experience requirement has been retained. This process, as in the United States, is subject to change; but there is no hint, particularly where advanced seminars integrate with experience, that experience will become less important.

As noted earlier, the Beamer Report recommended the elimination of experience as a requirement for certification and licensure because of a conclusion that an experience requirement could not be uniformly administered and adequately policed. The experience requirement in the United States is administered primarily through the use of employer attestation of the candidate's experience at the end of the period of experience. The form of this attestation varies from the requirement of a letter from the employer to completion of a detailed form requiring affirmation of completion of specified audit activities.

The procedures used by foreign accounting societies with an experience requirement to administer the qualification process are presented in Exhibit 2. Employer attestation is also used in almost every country. It stands clearly by itself, however, in only a few countries. Additional procedures, which may or may not aid in the control and evaluation of experience, are evident in other countries.

An administrative procedure closely related to employer attestation is the requirement of the candidate to maintain a diary or record of work experience. This procedure is required by eleven national societies. Maintenance of a diary by the candidate not only provides the certifying or licensing authority with more detailed information, but also emphasizes to the candidate his or her responsibility for obtaining satisfactory experience. Periodic appraisal or review of the candidate's progress is another procedure

used in a number of countries to supplement employer attestation. In Zimbabwe, for example, a semiannual report by the clerk and a review by the principal are monitored by a subcommittee of the Education and Training Committee of the Institute.[8]

Another procedure used in some countries is a formal adviser for the candidate. The contractual principal-clerk relationship still exists in the United Kingdom and many of its former colonies. A study of the education standards of these same countries in Exhibit 1 should dispel the notion that the relationship resembles a nineteenth century setting where the clerk exists in a state of servitude. The relationship seems to serve primarily as a clarification of the relative duties and responsibilities of the parties involved. In other countries, the advisory capacity is quite distinct from that of principal-clerk or employer-employee. In Australia, where candidates engage in a professional year of study integrating lectures and discussion with practical training, counsel with and assessments of candidates are made by practitioners who are not the candidate's employers. Each candidate is assigned to a specific group for purposes of lecture, discussion, and completion of written assignments. There is a group leader and a module assessor assigned to particular areas of study.[9]

The practicing membership that may assume responsibility for the training of candidates is also controlled and restricted in a few countries. In Canada and South Africa, firms must be approved to train. Firms must submit information to the appropriate authority which indicates there is sufficient diversity within the practice to provide the candidate with the opportunity to obtain the breadth and depth of training desired. Firms are subject to triennial review in both countries. As one might suspect, not all firms may qualify as training firms. For example, it has been estimated that 125 to 150 of the 450 firms in the province of Alberta, Canada, are approved to train.[10]

A final procedure to consider is the professional examination. Although a professional examination is given in the United States, its objective to validate academic accounting knowledge largely negates it as a control or evaluation instrument relevant to expe-

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[8] E. H. Thomas, executive director, Institute of Chartered Accountants of Zimbabwe, letter to the author (1 July 1981).

[9] Institute of Chartered Accountants in Australia, *Professional Year of Study 1981/82: Programme, Education Handbook, and Directions to Candidates* (Sydney: ICAA, 1981), 11.

[10] Steven J. Glover, director of Student Education, Institute of Chartered Accountants of Alberta, letter to the author (18 August 1981).

**Exhibit 2. Procedures Used to Administer Qualification as a Public Accountant, by Country**

| Country | Employer attestation | Formal adviser | Candidate diary | Periodic reports | Professional examination | Trainer approval |
|---|---|---|---|---|---|---|
| Australia | yes | Group leader and module assessor during professional year | no | no | At end of professional year | no |
| Belgium (expert comptable | Upon request | Agreement with maitre de stage | yes | Annual by candidate | 3 annual exams & thesis | no |
| Belgium (reviseurs d' entreprises) | yes | Agreement with maitre de stage | yes | Annual by candidate | 5 exams & final thesis and oral | no |
| Brazil | yes | no | no | no | optional | no |
| Bermuda | yes | no | yes | yes | At end of seminars & near end of practicum | Approval of firm |
| Canada | yes | no | yes | yes | At end of seminars & near end of practicum | Approval of firm |
| Colombia | yes | no | no | no | no | no |
| Denmark | yes | no | no | no | At end of practicum | no |
| France | no | yes | yes | Semiannual to advisor to institute | Thesis & oral at end of practicum | no |

| | | | | | | |
|---|---|---|---|---|---|---|
| Greece | yes | no | yes | At change in grade (3 grade levels) | At the end of education & upon completion of professional seminars | no |
| Hong Kong | yes | no | no | no | 3-5 exams (dependent on education) | no |
| Iceland | yes | no | no | no | At the end of experience | no |
| India | yes | Articled clerkship optional | no | no | Intermediate & final during practicum | no |
| Israel | yes | no | no | no | yes | no |
| Japan | yes | Optional or attendance at institute | yes | Quarterly during professional year | Intermediate & final (oral & written) | yes |
| Kenya | no formal procedures — each case reviewed individually | | | | | |
| Lebanon | yes | no | no | no | yes | no |
| Luxembourg | yes | no | no | no | no | no |
| Malaysia | yes | Contract optional | no | no | 1-3 exams dependent on education | |
| Netherlands | no | no | no | no | yes | no |
| New Zealand | yes | no | no | no | yes, exemption possible with university degree | no |

**Exhibit 2. Procedures Used to Administer Qualification as a Public Accountant, by Country (continued)**

| Country | Employer attestation | Formal adviser | Candidate diary | Periodic reports | Professional examination | Trainer approval |
|---|---|---|---|---|---|---|
| Norway | yes | no | no | no | yes | no |
| Pakistan | yes | Clerks articled to principal | no | no | Intermediate & final during practicum | yes |
| Scotland | yes | Clerks articled to principal | no | Only if change principal | 2 exams during practicum | yes |
| Singapore | yes | no | no | no | no | no |
| South Africa | no | Clerks articled to principal | no | no | Near end of experience | Firm approval |
| Sweden | yes | no | yes | no | no | no |
| Switzerland | yes | no | no | no | At end of experience | no |
| Trinidad-Tobago | yes | Articled clerkship optional | no | no | yes | no |
| Turkey | yes | no | no | no | At end of study | no |
| United Kingdom | yes | Clerks articled to principal | yes | Semiannual | 2 exams during practicum | Trainer approved |
| West Germany | yes + 2 audit reports | no | no | no | At end of experience written & oral | no |
| Zimbabwe | yes | Clerks articled to principal | yes | Semiannual | At end of education | no |

**Source:** Direct communication with accounting societies in the countries concerned, and publications of these societies.

rience. A number of countries offer a series of examinations during the practicum or near the end of the practicum. The placement of the examinations, particularly near the end of the practicum period, may indicate a conscious effort to use them to validate adequate experience. Whether such an exam is so constructed in any of the countries is not determinable from the information provided.

## CONCLUSION

Formal accounting education is emphasized as a major component of the professional qualification process throughout the world. In some of the developing countries, the accounting societies assume the major role of providing this education; however, in most countries, particularly those with more advanced economies, accounting education at the college level is apparent. In a number of countries, the accounting society is involved in advanced, practical training beyond formal education which seeks to integrate academic knowledge with practical application. In the United States, such training is left to the firms or specialized groups. Advanced accounting education has a decidedly academic focus.

Experience also appears to be considered a major component of the admissions process. Practical experience generally is longer than in the United States and is generally restricted to practice in public accounting. The administrative procedures employed to help control and evaluate experience vary from country to country but in many countries are more extensive than administrative procedures used in the United States.

Countries with advanced, industrialized economies and long-established accounting professions similar to those of the United States impose a greater variety of procedures on the admissions process than does the United States. Canada, for example, integrates a number of procedures into the admissions process. In order to ensure that the candidate has the appropriate learning environment, firms must be approved to train. To ensure this environment is properly utilized, candidates must maintain a diary that is periodically reviewed and attested to by the employer. To ensure that all candidates, regardless of employment, receive some uniformity of preparation for practice and the professional examination, all candidates must attend practitioner-taught, institute-sponsored seminars on financial reporting, taxation, and auditing.

The information in Exhibits 1 and 2 should give the profession in the United States pause for thought. Should the profession and

its practitioners become more formally involved in advanced seminars, either as a supplement to or in lieu of a fifth year of college study, which can ease the transition from classroom to practice? Is the Beamer Committee correct in its conclusion that experience cannot be equitably administered and effectively policed? Can employer attestation be effectively supplemented by other administrative procedures, such as the candidate diary, which would enhance the equity and enforcement of a meaningful experience requirement?

Unique conditions exist in each country. The wide dispersion of the control of accounting licensure in the United States cannot be overemphasized. An in-depth study of the qualification processes in other countries may provide the ingredients for a uniform qualification process of highest possible quality in the United States.

## BIBLIOGRAPHY BY COUNTRY


**Australia**

Graham, A. W., national registrar, Institute of Chartered Accountants in Australia. Letter to the author. 22 June 1981.

Institute of Chartered Accountants in Australia. *Education Handbook.* Sydney: Beaver Press, 1980.

______. *Professional Year of Study 1981/82: Programme, Education Handbook, and Directions to Candidates.* Sydney: Institute of Chartered Accountants in Australia, 1981.

**Belgium (Expert Comptable)**

Institute of Chartered Accountants in England and Wales and College National des Experts Comptables de Belgique. *Requirements for Qualification as an Expert Comptable CNECB in Belgium.* 2d. ed. London: Institute of Chartered Accountants in England and Wales, 1980.

**Belgium (Reviseur d'enterprises)**

Anglo-Belgian Liaison Committee. *Requirements for Qualification as a reviseur d'enterprises in Belgium.* London: Institute of Chartered Accountants in England and Wales, 1977.

**Brazil**

Dreyfuss, Roberto, Instituto dos Auditores Independentes do Brazil. Letter to the author. 9 September 1981.

**Bermuda**

Gascoigne, S., executive director, Institute of Chartered Accountants in Bermuda. Letter to the author. 6 July 1981.

**Canada**

Bolton, Lorne R., chairman. *A Professional Approach to the Education of Chartered Accountants in British Columbia: Report to Council of the Task Force on a School of Chartered Accountancy.* Vancouver: Institute of Chartered Accountants in British Columbia, 1979.

Glover, Steven J., director, Student Education, Institute of Chartered Accountants in Alberta. Letter to the author. 18 August 1981.

Institute of Chartered Accountants of Alberta. *Students' Information Handbook.* Edmonton: ICAA.

Lindley, Vera D., executive director, New Brunswick Institute of Chartered Accountants. Letter to the author. 25 September 1981.

Ostrowski, Paul F., assistant director of Education (Research), Institute of Chartered Accountants of Ontario. Letter to the author. 13 July 1981.

Wallace, R. K., director of Education, Institute of Chartered Accountants of British Columbia. Letter to the author. 3 December 1981.

**Colombia**

Silva, German Escobar, president, Instituto Nacional de Contadores Publicos. Letter to the author. 19 June 1981.

**Denmark**

Institute of Chartered Accountants in England and Wales and Foreningen af Statsautoriserede Revisorer FSR. *Requirements for Qualification as a Statsautoriseret Revisor in Denmark.* 2d. ed. London: ICEAW, 1979.

**Dominican Republic**

Tronconso, Marcos J., vice chairman, Board of Directors, Instituto de Contadores Publicos Autorizados de la Republica Dominicana. Letter to the author. 7 July 1981.

**France**

Conseil Superieur, Ordre des Experts Comptables et des Comptables Agrees. *Modalites d'Acces et d'Exercise de la Profession d'Expert-Comptable.* Paris: Ordre des Experts Comptables et des Comptables Agrees, 1981.

LeDouble, D., le secrétaire Général, Conseil Supérieur, Ordre des Experts Comptables et des Comptables Agréés. Letter to the author. 28 July 1981.

**Greece**

Zographos, N. J., president, Institute of Certified Public Accountants of Greece. Letter to the author. 2 July 1981.

**Hong Kong**

Hong Kong Society of Accountants. *HKSA Student Handbook.* Hong Kong: Hong Kong Society of Accountants, 1980.

Tso, Corinna, administrative assistant, Hong Kong Society of Accountants. Letter to the author. 16 June 1981.

**Iceland**

Institute of Chartered Accountants in England and Wales and Felag Löggiltra Endurskodenda. *Requirements for Qualification as a Löggiltur Endurskodandi in Iceland.* London: ICEAW, 1980.

**India**

Institute of Chartered Accountants of India. *Education and Training for Chartered Accountancy.* New Delhi: Institute of Chartered Accountants of India, 1980.

**Indonesia**

Soebagjo, secretary, Indonesia Institute of Accountants. Letter to the author. 30 July 1981.

**Israel**

Rotman, I., honorable secretary, Institute of Certified Public Accountants in Israel. Letter to the author. 4 October 1981.

**Japan**

The Japanese Institute of Certified Public Accountants. *CPA Profession in Japan*. Tokyo: JICPA, 1979.

______. *CPAs in Japan*. Tokyo: JICPA, 1970.

**Kenya**

Nyagah, J., secretary, Institute of Certified Public Accountants of Kenya. Letter to the author. 19 June 1981.

**Lebanon**

Middle East Society of Associated Accountants. *Constitution, By-Laws, Rules of Professional Conduct*. Beirut: Middle East Society of Associated Accountants, 1970.

**Luxembourg**

Kirsch, G., secretary, Ordre des Experts Comptables Luxembourgeois. Letter to the author. 12 June 1981.

**Malaysia**

Malaysian Association of Certified Public Accountants. *A Guide for Students*. 3d ed. Kuala Lumpur: Malaysian Association of Certified Public Accountants, 1980.

**Netherlands**

Voltan, H., Algemeen directeur, Netherlands Instituut van Registeraccountants. Letter to the author. 18 June 1981.

**New Zealand**

Butler, R. W. G., deputy director, New Zealand Society of Accountants. Letter to the author. 14 July 1981.

**Norway**

Institute of Chartered Accountants in England and Wales and Norges Statsautoriserte Revisorers Forening. *Requirements for Qualification as a Statsautorisert Revisor or as a Registrert Revisor in Norway*. London: ICAEW, 1980.

**Pakistan**

Hussain, Imdad Altaf, assistant secretary, Institute of Chartered Accountants of Pakistan. Letter to the author. 18 July 1981.

**Panama**

deSelles, Xiomara, executive secretary, Colegio de Contadores Publicos Autorizados de Panamá. Letter to the author. 5 June 1981.

**Paraguay**

Galeano, Juan Antonio, Auditores y Cousultores Asociados. Letter to the author. 17 August 1981.

**Philippines**

Manabat, Delores, executive director, Philippine Institute of Certified Public Accountants. Letter to the author, 27 July 1981.

**Scotland**

Institute of Chartered Accountants of Scotland. *Royal Charter and Rules with Variations to June 1980.* Edinburgh: William Blackwood & Sons, for the Institute of Chartered Accountants of Scotland, 1980.

———. *The C.A. Student Guide.* Edinburgh: William Blackwood & Sons, for the Institute of Chartered Accountants of Scotland, 1980.

**Singapore**

Yip, Jessamyn, deputy registrar, Singapore Society of Accountants. Letter to the author, 24 June 1981.

**South Africa**

Mockler, K. G., executive director, South African Institute of Chartered Accountants. Letter to the author, 2 July 1981.

Public Accountants and Auditors' Board. *Manual of Information for the Guidance of Registered Accountants and Auditors.* Johannesburg: Public Accountants' and Auditors' Board, 1980.

**Sweden**

Institute of Chartered Accountants in England and Wales and Foreningen Auktoriserade Revisorer FAR. *Requirements for Qualification as an Auktoriserad Revisor in Sweden.* London: ICAEW, 1979.

**Switzerland**

Meyer, Harald, secretary, Schweizerische Treuhand-undRevisionskammer. Letter to the author, 9 June 1981.

**Trinadad-Tobago**

Moonsie, Glenrose, secretary/manager, Institute of Chartered Accountants of Trinidad & Tobago. Letter to the author, 3 July 1981.

**Turkey**

Simga, Can, general secretary, Expert Accountants' Association of Turkey. Letter to the author, 3 July 1981.

**United Kingdom**

Institute of Chartered Accountants in England and Wales. *Requirements for Qualification as a Chartered Accountant or as a Certified Accountant in the United Kingdom and the Republic of Ireland.* 3d ed. London: ICAEW, 1979.

**Venezuela**

Tirso, Arevalo M., president, Asociacion de Contadores de Venezuela. Letter to the author, 28 July 1981.

**West Germany**

Institute of Chartered Accountants in England and Wales and Institut der Wirtschaftsprüfer in Deutschland e.V. *Requirements for Qualification as a Wirtschaftsprüfer in the Federal Republic of Germany.* 3d. ed. London: ICAEW, 1980.

**Zimbabwe**

Thomas, E. H., Institute of Chartered Accountants of Zimbabwe. Letter to the author. 1 July 1981.

# *The Effects of Combined Audit and Management Services on Public Perception of Auditor Independence in Developing Countries: The Malaysian Case*

FERDINAND A. GUL and TEOH HAI YAP*

In recent years, there has been an unprecedented expansion by public accounting firms into the area of management services. Evidence suggests that many large public accounting firms both in developed and underdeveloped countries not only conduct traditional audits, but also render management services for their clients. In the United States, a survey conducted in the 1960s indicated that management consulting for individual practitioners increased 35 percent from 1959 to 1964.[1] In 1968, Kell reported that 15 percent of the total revenue of practicing CPAs was derived from management services and predicted that in the following ten to twenty years, management services were expected to generate between 25 to 50 percent of the total revenue.[2] In January 1981, it was estimated that there were at least eight thousand full-time management consulting personnel in CPA firms.[3] The same trends are predicted for Britain and Australia. These figures and the evidence that exists clearly indicate the growing significance of management consulting services in public accounting firms.

By providing both management services and audits, particularly

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[1] *The CPA* (American Institute of Certified Public Accountants) (July-August 1964).

[2] W. G. Kell, "Public Accounting's Irresistible Force and Immovable Object," *Accounting Review* (April 1968), 266.

[3] See P. B. Chenok, "Exciting Challenges of MAS," *Journal of Accountancy* (June 1981), 81.

to the same client, public accounting firms are open to the risk that the independence of auditors could be seriously impaired. Auditor independence has always been the basis of public confidence in the work of auditors. The importance of public confidence in the auditors' independence is emphasized in the Australian Statement of Auditing Standards (AUS 1, 15):

> It is of utmost importance to the profession that the confidence of the general public in the independence of auditors be maintained. Public confidence is likely to be impaired if there is evidence of an actual lack of independence; it might also be impaired by the existence of circumstances which reasonable people might believe would influence independence. An auditor must be recognized as independent and be free of any obligation to or interest in, the client or its directors. The auditor should not only be independent in fact; he should avoid situations that may lead others to doubt his independence.

An apparent lack of independence can be as damaging to public confidence, and thus to the audit profession, as a direct violation of independence. Several writers suggest that the provision of management services by auditing firms can adversely affect public confidence. As Mautz and Sharaf, for example, state:

> Management, of course, is at liberty to accept, modify, or reject a given piece of expert advice. But advice is requested on the promise that it will be given rational consideration. It is requested because management feels its own inability to know all the alternative solutions to the problem at issue and evaluate them and choose from among them. Management wants the advice and intends to use it; advice is sought and paid for to be followed, not be ignored. It seems a folly indeed to separate advising and judgment making.[4]

In supporting this reasoning, Schulte also argues that the consulting relationship creates a situation where the interests of the auditor and the client appear to be almost identical. Schulte asserts that the auditor as a consultant becomes "both logically and emotionally involved in the decision outcome and this will affect audit independence."[5] Empirical studies by Schulte[6] and other writers support the concept that the perceived independence of the audit firm is impaired if it also renders management services. More recently, Firth found that 63 percent of financial analysts and 61 percent of loan officers sampled indicated that their

[4] R. K. Mautz and H. A. Sharaf, *The Philosophy of Auditing* (American Accounting Association, 1961), 221.

[5] A. A. Schulte, Jr., "Management Services: A Challenge to Audit Independence?" *Accounting Review* (October 1966), 721-28.

[6] Ibid.

perception of independence was in fact adversely affected when the audit firm was also engaged in management consulting.[7]

Most of these viewpoints and findings are in the context of the developed countries such as the United States, Britain, and Australia. The accounting professions in these countries have had a relatively longer history and are more developed that those of underdeveloped countries. Moreover, users of corporate reports in the developed countries are also more sophisticated in terms of their greater reliance on understanding and use of corporate reports.[8] In contrast, underdeveloped countries are characterized by lower levels of literacy and education. On the basis of these differences, it may be possible that public perception of auditor independence in terms of combined audit–non-audit services may not be similar to the view of the public in the more developed free world. Public perception of auditor independence in underdeveloped countries is also significant in the context of the important role of the auditor in the development of the commercial sector. In this context, Enthoven asserts:

> . . . corporate reporting and disclosure of information to the financial community plays an important part in building investor confidence and interest and stimulating the development of capital markets. . . .
>
> . . . many countries have no proper capital markets precisely because there is no financial reporting of a nature to generate investor confidence.[9]

While existing evidence suggests that perceived independence is affected as a result of the provision of management services, the major professional accounting bodies have taken the official position that the provision of management consulting services does not impair auditor independence so long as the audit firm does not participate in the decision-making process. The Australian Institute of Chartered Accountants, for example, states in its Ethical Pronouncements (AEP 10, par. 24):

> When providing management consulting services to an audit client, a practice or a person in the practice must not participate in the executive function of that client. Decision making is part of the duties of the board of directors and management of a company and not of its auditors.

[7] Michael Firth, "Perceptions of Auditor Independence and Official Ethical Guidelines," *Accounting Review* (July 1980).
[8] Adolf J. H. Enthoven, "Economic Development and Accountancy," *Journal of Accountancy* (August 1965), 33.
[9] Ibid.

## OBJECTIVES OF THE STUDY

Bearing these considerations in mind, this study empirically investigated the effects of combined audit and management consulting services by public accounting firms on a sample of the Malaysian public. Since Malaysia is fairly representative of the developing countries in the free world bloc, empirical evidence may provide useful inputs for accounting and auditing policy formulations in other similar countries. In addition, such evidence can also provide comparative data for similar research efforts in other countries. Although writers[10] have provided some empirical evidence in the more developed countries (e.g., United Kingdom), there has been, as far as the authors are aware, no such study in Malaysia or other developing countries. It is hypothesized in this study that the public in Malaysia, as in other developing countries, is less sophisticated vis-à-vis their counterparts in the advanced countries (e.g., the United Kingdom or United States), and this difference is reflected in their attitudes toward auditors' independence.

## METHOD

A pilot-tested questionnaire was distributed to a cross section of the public who were selected at random comprising practicing accountants, bankers, managers, and a group of shareholders. An analysis of those who were contacted and agreed to participate follows.

| | |
|---|---|
| Public accountants[11] | 23 |
| Bankers | 24 |
| Managers | 29 |
| Shareholders[12] | 34 |
| Total | 110 |

The rationale for identifying different groups of subjects for this investigation was to obtain some empirical evidence on whether different categories of users perceived the independence problem differently. Firth recognizes this possibility: "Given that it is the users of financial statements who need to be reassured about

[10] Firth, "Auditor Independence."

[11] The majority of responding public accountants were from large accounting firms and, in all the cases, management consulting services were provided by these public accounting firms.

[12] Shareholders reported ownership of shares in public companies. It should be noted that some members of the other groups also could well be shareholders.

auditor independence there seems to be a need for some objective evidence relating to their perceptions."[13]

The questionnaire addressed five related issues. The first issue concerned the overall question of auditor independence. Respondents were asked whether they believed that auditor independence is necessary for ensuring confidence in the usefulness of the auditor's report. Independence was defined as an objective state of mind which is not influenced by the views of clients and the avoidance of situations which would tend to impair objectivity or create personal bias that would influence the auditors' delicate judgments. The second issue was related to the question of whether the expansion into management services and other non-audit areas affected the respondents' confidence in the auditors' independence. The third issue concerned whether respondents believed that it was possible to separate the advisory role from the decision-making role when an audit firm renders non-audit services. This is significant since professional accounting bodies (e.g., The Institute of Chartered Accountants, Australia) suggest that this distinction is possible since they argue that auditors can provide advice provided they do not make decisions. In contrast, some writers[14] are of the opinion that it is difficult to separate the decision-making and the advisory roles. Responses to this question may clarify these conflicting viewpoints. Fourth, an attempt was make to ascertain whether the disclosure of audit and non-audit fees separately in the financial statements provided respondents with a better understanding of the relationship between the client, the firm, and the auditor. While Malaysian companies disclose auditors' remuneration in their financial statements, no attempts are made to separate the fees for audit services and non-audit services. An extract of a typical profit and loss account of an actual Malaysian company is shown in Appendix A. In contrast, financial statements in some of the advanced countries report fees for both the audit and non-audit services. Appendix B contains an extract from the annual report of an Australian company in which the remuneration of auditors was separated into those for audit services and for other services. Respondents were also asked to what degree they believed that an audit firm can perform a management consulting type of service on a fee basis and still remain completely independent.

[13] Firth, "Auditor Independence."
[14] For example, Mautz and Sharaf, and Schulte.

## RESULTS AND DISCUSSION

As expected, respondents were almost unanimous in their view that auditor independence is vitally important in order that the auditor's report can be considered useful. No such consensus, however, was evident with regard to the other issues. Exhibit 1 summarizes the responses to the question of whether expansion into the field of management consulting and other non-audit services will affect respondents' confidence in auditor independence.

Approximately 83 percent of public accountants indicated that expansion by audit firms into non-audit services reduced their confidence in auditor independence. Bankers and managers also expressed similar views. Respondents, in general, believed that the expansion into management consulting affected their confidence. Only two public accountants agreed with the official stand by professional accounting bodies that confidence would not be adversely affected. Surprisingly, two other public accountants even indicated an increase in confidence, a view which was also shared by 23 percent of respondents from the shareholder group. In fact, 41 percent of the shareholders were either not affected or felt more confident as a result of the expansion of auditors into management services. A cursory glance of Exhibit 1 indicates that there is a significant difference between the views of the shareholders and other respondents.

To test for any statistically significant difference between shareholders and other groups of users in their perception of confidence in auditor independence, a chi-squared test was performed. Responses from public accountants, bankers, and managers were collapsed into one group and those from shareholders into another group. Respondents who indicated confidence was unaffected or

**Exhibit 1. Distribution of Responses — Expansion into Non-Audit Service**

| | Definitely and somewhat lessened confidence | Not affect confidence | Definitely and somewhat increased confidence |
|---|---|---|---|
| Public accountants | 19 (83%) | 2 (8.5%) | 2 (8.5%) |
| Bankers | 18 (75%) | 6 (25%) | — |
| Managers | 23 (80%) | 6 (20%) | — |
| Shareholders | 20 (59%) | 6 (18%) | 8 (23%) |
| | 80 (73%) | 20 (18%) | 10 (9%) |

confidence was increased were also collapsed into one group, thus providing a 2 × 2 contingency table.[15] Since it was expected that respondents' confidence in auditor independence would be adversely affected as a result of the auditors' involvement in nonaudit services, a 1-tailed (directional) test was employed. As presented in Exhibit 2, the $\chi^2$ value was significant at the 0.05 level (1-tailed).

The statistically significant differences in confidence in auditor independence between the shareholder group and the other groups of users when an audit firm expands into non-audit services may be due to a number of reasons. As a consequence of their constant contact and relationship with auditors, public accountants, bankers, and managers are more familiar with the attest function of auditors. Shareholders, on the other hand, represented a more diverse group whose understanding of the significance of auditor independence may be limited. Possibly, the provisions of the Companies Act 1965 are generally considered as affording adequate safeguard for the interests of shareholders. Moreover, like all other professional groups, auditors and accountants are held in high esteem in the developing countries where the supply of professional expertise is usually inadequate.[16] Accordingly, participation by auditors in management consulting and other non-audit service tends to produce an "inversion effect" in that the confidence of shareholders in the work of auditors is enhanced rather than diminished. Auditor participation in the affairs of a company through management consulting and other non-audit services is perceived by many shareholders as potentially beneficial to improving a company's business prospects.

**Exhibit 2. Summary Distribution of Responses — Expansion into Non-Audit Services**

| | Lessened confidence | Not affected and increased confidence |
|---|---|---|
| Shareholders | 20 | 14 |
| All other groups | 60 | 16 |
| Total | 80 | 30 |

$\chi^2 = 4.79$, 1 dp, > 0.05, 1-tailed

[15] This was necessary so as not to violate the assumptions of the chi-square (i.e., adequate samples in each cell). See S. Siegel, *Non-parametric Statistics for the Behavioral Sciences* (New York: McGraw-Hill, 1956).

[16] George M. Scott, "Accounting and Developing Nations," International Business Series 9, *Studies in Accounting* (Seattle: University of Washington, 1970), 79.

Responses to the question of whether it is possible to distinguish between performance of management services and participating in decision making produced some mixed results. As presented in Exhibit 3, responses of all four groups of users appeared relatively undecided on this issue. This is not surprising since the distinction between providing management advice and participating in decision making is often unclear.[17] This demarcation is more difficult in developing countries such as Malaysia, where there is a dearth of management expertise. Under these circumstances, there is a tendency for business organizations to rely heavily on management consultants for advice and decisions on various matters of significance. Thus, a greater possibility for management consultants to be drawn into the decision-making process exists.

The response to the question of whether disclosure of audit and non-audit fees as separate categories would provide a better understanding of the relationship between the auditor and client firm showed some consistency across all groups. Exhibit 4 reports that the majority of respondents generally felt that a separate disclosure of fees would ensure a better understanding of the relationship

**Exhibit 3. Distribution of Responses — Separation of Services**

| | Believe that separation is possiblt | Not sure | Do not believe that separation is possible |
|---|---|---|---|
| Public accountants | 11 (48%) | 4 (17%) | 8 (35%) |
| Bankers | 3 (13%) | 15 (62%) | 6 (25%) |
| Managers | 14 (48%) | 10 (35%) | 5 (17%) |
| Shareholders | 12 (35%) | 12 (35%) | 10 (30%) |
| | 40 (36%) | 41 (37%) | 29 (26%) |

**Exhibit 4. Disclosure of Audit and Non-audit Fees and Better Understanding of Relationship**

| | Provide a better understanding | Do not provide a better understanding |
|---|---|---|
| Public accountants | 20 (87%) | 3 (13%) |
| Bankers | 15 (63%) | 9 (37%) |
| Managers | 16 (55%) | 13 (45%) |
| Shareholders | 20 (59%) | 14 (41%) |

[17] Schulte, "Management Services."

between the auditor and the client. Almost all public accountants, however, were relatively more in favor of disclosure of both audit and non-audit fees than were the other groups.

To determine whether there was a significant difference in their attitude toward the disclosure question between public accountants and other groups of users, a $\chi^2$ test was performed on the data in Exhibit 4. Since there was no prior evidence to indicate a possible directional difference, a 2-tailed test was employed. The results reported in Exhibit 5 indicate that there was a significant difference between the accountants and other groups ($\chi^2 = 6.37$, 1 df, 2-tailed, $p < 0.02$). This may be explained by the fact that accountants were the parties most directly involved with disclosure and, consequently, they were more conscious of this need.

This finding is significant since, as mentioned earlier, Malaysian companies do not generally disclose audit and non-audit fees. In view of these findings, the profession in Malaysia might consider requiring companies to disclose audit and non-audit fees separately, particularly since 65 percent of all respondents were in favor of separate disclosures.

The final question addressed the issue concerning the degree to which an audit firm can perform a management consulting type of service on a fee basis and continue to remain independent. The results are summarized in Exhibit 6.

The majority of shareholders thought that an audit firm could perform management services on a fee basis and still remain independent. Other categories of users were generally either unsure or of the opinion that the audit firm cannot remain independent if it provided management consulting services on a fee basis. The results reinforce the earlier findings that shareholders believe that the auditor's role includes the provision of non-audit services (including management consulting) by virtue of the auditors' expertise in these areas.

**Exhibit 5. Disclosure of Audit Fees and Understanding of Relationship between Auditor and Client**

| | Provide better understanding | Do not provide better understanding |
|---|---|---|
| Public accountants | 20 | 3 |
| All other groups | 51 | 36 |
| Total | 71 | 39 |

$\chi^2 = 6.37$, 1 df, $p < 0.02$ (2-tailed)

**Exhibit 6. Management Consulting Service on Fee Basis and Independence**

| | Definitely or more likely to remain independent | Possibly can or cannot | Definitely or most likely cannot remain independent |
|---|---|---|---|
| Public accountants | 5 (22%) | 8 (35%) | 10 (43%) |
| Bankers | 6 (25%) | 8 (33%) | 10 (42%) |
| Managers | 6 (21%) | 11 (33%) | 12 (41%) |
| Shareholders | 20 (59%) | 10 (29%) | 4 (12%) |
| | 37 | 37 | 36 |

## SUMMARY

Since management consulting and other non-audit services constitute a significant segment of an audit firm's business, it is important that the provision of these services not affect public confidence in the auditor's attest function. Based on a questionnaire survey, this study showed that auditor independence is important as perceived by the public if the auditor's report is to be useful. Also, the majority of respondents believed that expansion by audit firms into non-audit services reduced their confidence in the auditor's independence. A smaller number of shareholders subscribed to this view; however, a statistically significant difference in the attitudes of shareholders and other users was found. An inference which may be drawn from this is that Malaysian shareholders are less sophisticated and consequently are more likely to believe that participation by auditors in management consulting and other non-audit services will add credibility to the latter's work as auditors. It was also found that respondents felt that it was not possible to separate rendering of management services from participating in decision making. In developing countries faced with limited managerial expertise, it is not unusual for management consultants to be drawn into the decision-making process. A majority of participants also believed that separate disclosure of audit and non-audit fees provided a better understanding of the relationship between the auditor and client. The Malaysian professional bodies may usefully note this view as a guideline for formulating standards or guidelines on auditing. Finally, the issue of whether audit firms could render management consulting services and still remain completely independent provided no definite conclusions, except in the case of shareholders, who believed that auditors could still remain independent. This is consistent with the earlier inference

that shareholders are less sophisticated users of financial statements vis-à-vis the other groups. Several issues raised in this study have implications for accounting/auditing policy formulations in Malaysia and perhaps also in other similar developing countries.

**APPENDIX A. MALAYSIAN CONTAINERS (1974) LTD.: ABSTRACT FROM THE ANNUAL ACCOUNTS**

PROFIT AND LOSS ACCOUNT FOR THE YEAR ENDED 31 MARCH 1981

| | Note | | 1980 |
|---|---|---|---|
| Profit before taxation | | $2,015,903 | $1,443,304 |
| After charging — | | | |
| Auditors' remuneration | | $ 6,750 | $ 6,000 |
| Directors' emoluments | | 19,000 | 19,000 |
| And after crediting — | | | |
| Gross dividends from unquoted subsidiary companies | | 2,004,000 | 1,414,000 |
| Gross dividend received from an unquoted company | | — | 32,400 |
| Interest income | | 63,609 | 36,919 |
| Less: Taxation | 14 | 812,876 | 576,750 |
| Profit for the year after taxation | | 1,203,027 | 866,554 |
| Add: Extraordinary item — gain on sale of unquoted investment | | — | 335,400 |
| Profit for the year after taxation and extraordinary item | | 1,203,027 | 1,201,954 |
| Unappropriated profits brought forward | | 669,951 | 588,797 |
| Amount available for appropriation | | 1,872,978 | 1,790,751 |
| Appropriations | | | |
| Transfer to capital asset realization reserve | | — | 335,400 |
| Dividends — interim paid 11% based on an enlarged share capital of $8,925,000 (1980 — 11%) less tax | | 589,050 | 392,700 |
| — final proposed 11% based on an enlarged share capital of ($8,925,000) (1980 — 11%) less tax | | 589,050 | 392,700 |
| | | 1,178,100 | 785,400 |
| | | 1,178,100 | 1,120,800 |
| Unappropriated profits carried forward | 9 | $ 694,878 | $ 669,951 |

**APPENDIX B. MYER: ABSTRACT FROM THE 57TH ANNUAL REPORT, 1982**

| | Consolidated | | Holding Company | |
|---|---|---|---|---|
| | 1982 $'000 | 1981 $'000 | 1982 $'000 | 1981 $'000 |
| 2 Operating profit before income tax is after the following | | | | |
| (a) Items charged | | | | |
| Depreciation and amortization of fixed asses | | | | |
| Buildings | 4,209 | 3,404 | | |
| Other | 23,371 | 17,196 | 1,437 | 320 |
| Amortization of deferred costs (note 17) | 4,672 | 900 | 310 | 178 |
| Increase in provision for doubtful debts | 175 | 1,099 | | |
| Bad debts written off net of recoveries | 1,211 | 818 | | (15) |
| Provision for certain self-insured risks | 144 | 155 | | |
| Remuneration of auditors | | | | |
| Audit services | 767 | 602 | 94 | 113 |
| Other services | 169 | 132 | 81 | 92 |
| (The auditors did not receive any other benefits) | | | | |
| Interest paid and payable to | | | | |
| Subsidiary companies | | | 2,034 | 1,567 |
| Others | 57,825 | 24,905 | 28,121 | 19,263 |
| Loss on disposal of fixed assets | 1,885 | 112 | 1,135 | |
| (b) Items credited | | | | |
| Received from subsidiary companies | | | | |
| Interest | | | 36,120 | 28,636 |
| Dividends | | | 8,928 | 29,226 |
| Management fees | | | 27,052 | 21,763 |
| Deferred income | 9,075 | 3,889 | 9,075 | 3,889 |
| Dividends from associated companies | | 100 | | 100 |
| Dividends from unrelated companies | 12 | 6 | 6 | 5 |
| Profit on disposal of fixed assets | 18 | 3 | | |

# *SFAS No. 52: Progress or Problem?*

DAHLI GRAY*

Problems surround foreign currency translation accounting. The Statement of Financial Accounting Standards (SFAS) No. 52, *Foreign Currency Translation,* was issued in December 1981 to replace SFAS No. 8, *Accounting for the Translation of Foreign Currency Transactions and Foreign Currency Financial Statements.* SFAS No. 52 is not the panacea many hoped it might be; rather, it is a further complicating factor in an already complicated process.

This paper reports on the impact of SFAS No. 52 on fifty Fortune 500 corporations. The results indicate that the Financial Accounting Standards Board (FASB) Concept Statement objectives are subordinated to the goal of ever-increasing reported earnings per share (EPS) growth.

The results are presented within the context of a comparative analysis of SFAS No. 8 and 52. This context clarifies the accounting requirements of SFAS No. 52, and how it is changing financial accounting theory.

A major change caused by transition to SFAS No. 52 from SFAS No. 8 concerns the reporting of translation gains and losses. With SFAS No. 8, these gains and losses were reported as a component of the income statement. With SFAS No. 52, translation adjustments are reported as a component of stockholders' equity.

A second change is the translation method used. With SFAS No. 52, the current rate method is used instead of the temporal method as required by SFAS No. 8. These reporting and measurement changes have had a significant impact on EPS as this study indicates. To explain and understand these changes, the objective of translation is discussed next.

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## OBJECTIVE OF TRANSLATION

In 1975, the FASB defined the objective of translation as measuring and expressing the assets, liabilities, revenue, or expenses in dollars that are measured or denominated in foreign currency.[1] In 1981, the FASB redefined the translation objective as follows: "Reflect in consolidated statements the financial results and relationships of the individual consolidated entities as measured in their functional currencies."[2]

In 1975, the FASB's goal was consistent measurement and reporting practice in terms of the U.S. dollar. In 1981, the FASB requested consistent reporting practice in terms of the U.S. dollar, while allowing measurement in all denominations of money. This change in measurement is examined next.

## MEASUREMENT CONCEPT

SFAS No. 52 introduced a new measurement concept entitled the functional currency concept, which distinguished between measurement and reporting. The currency used for measurement is the functional currency.

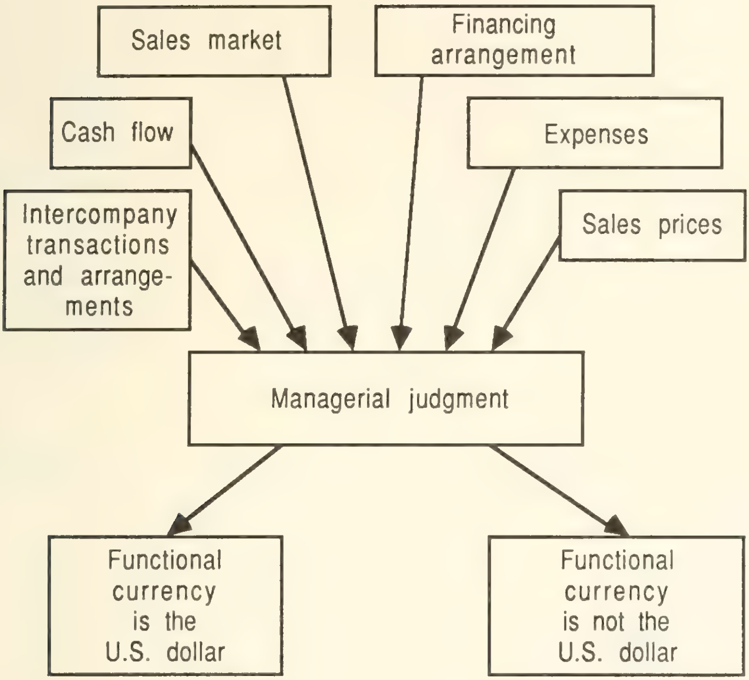
> An entity's functional currency is the currency of the primary economic environment in which the entity operates; normally, that is the currency of the environment in which an entity primarily generates and expends cash.[3]

The reporting currency is "the currency in which an enterprise prepares its financial statements."[4]

The distinction between measuring and reporting affects financial accounting practice relative to foreign currency translation. American corporations use the U.S. dollar for reports and can use a variety of measurement units (i.e., all possible denominations of money) to record foreign operations data (e.g., Mexican subsidiaries may use the peso to record business activities, and German subsidiaries may use the mark). SFAS No. 52 provides six indicators for management to use in selecting the functional currency with management judgment as the seventh and overriding indicator (see Exhibit 1). These indicators reflect the perception of foreign subsidiaries as "net investments" as discussed next.

[1] Financial Accounting Standards Board, *Statement of Financial Accounting Standards No. 8: Accounting for the Translation of Foreign Currency Transactions and Foreign Currency Financial Statements* (Stamford, Conn.: FASB, 1975), par. 6.
[2] Financial Accounting Standards Board, *Statement of Financial Accounting Standards No. 52: Foreign Currency Translation* (Stamford, Conn.: FASB, 1981), par. 4.
[3] Ibid., 177.
[4] Ibid.

**Exhibit 1. Determining the Functional Currency**




## NET INVESTMENT CONCEPT

The net investment concept views each foreign operation as an "island," not as a branch or division of a single company.

It distinguishes between foreign operations that are extensions of affiliated domestic operations (dependent operations) and those whose operations are essentially self-contained and, therefore, not dependent on affiliated domestic operations.[5]

Rather than the parent company plus all of its subsidiaries as one economic entity, multinational corporations distinguish operations on the basis of dependency. Seven indicators (see Exhibit 1) determine dependency, with managerial judgment as the overriding variable. This distinction affects the reporting practices of financial accounting as discussed next.

[5] FASB, *SFAS No. 8,* par. 140.

## REALIZATION VERSUS RECONDITION

Accountants, analysts, managers, and others differ in their opinions on how to report translation adjustments. Some support the method mandated in SFAS No. 8, which results in translation adjustments being considered realized and thereby reported in the income statement. Financial accounting theory, as promulgated by the FASB, supports the idea that "exchange gains and losses shall be included in determining net income for the period in which the rate changes."[6] On the other hand, SFAS No. 52 recommends that

> [If] an entity's functional currency is a foreign currency, translation adjustments result from the process of translating that entity's financial statements into the reporting currency [i.e., the U.S. dollar]. Translation adjustments shall not be included in determining net income but shall be reported separately and accumulated in a separate component of equity.[7]

SFAS No. 52 changes financial accounting theory regarding translation gains and losses, which explicitly states that "gains and losses result from . . . changes in foreign exchange rates."[8]

Exhibit 2 summarizes SFAS No. 52 translation adjustment reporting requirements. As it illustrates, when the indicators of Exhibit 1 suggest that the functional currency is not the U.S. dollar, whether the foreign economy is highly inflationary intercedes to support or alter the functional currency choice.

Managerial judgment plays a major role in classifying an economy as highly inflationary for financial accounting purposes. Managers may use either absolute numbers or trends to determine the degree of inflation. For example, if the total of the preceding three years' inflation rates equals or exceeds 100 percent, the FASB suggests that managers consider the economy highly inflationary for financial accounting purposes.[9] Managerial judgment is the deciding factor regarding selection of functional currencies, as well as in classifying economies as highly or not-highly inflationary. SFAS No. 52 provides only guidance. It does not mandate decisions.

SFAS No. 52 is an accounting standard, a set of rules, which incorporates a method of "breaking the rules" as part of the standard. Managerial judgment is the method, and the resulting financial statements reflect managerial preference. Managers can

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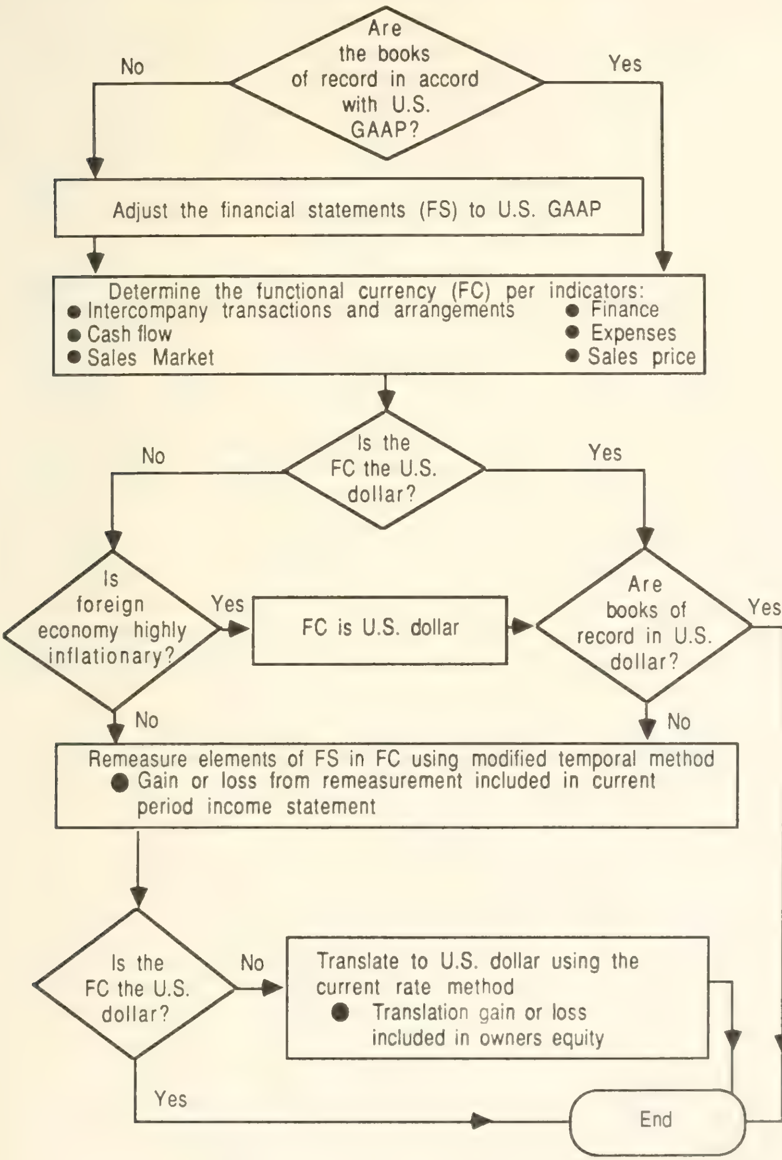
[6] Ibid., par 17.

[7] FASB, *SFAS No. 52*, par. 13.

[8] Financial Accounting Standards Board, *Statement of Financial Accounting Concepts No. 3: Elements of Financial Statements of Business Enterprises* (Stamford, Conn.: FASB, 1980), par. 70.

[9] FASB, *SFAS No. 52*, par. 11.

**Exhibit 2. Translation Process Per SFAS No. 52**



control financial accounting reporting practices. As the following research results indicate, managers did indeed control reported earnings via their choice of foreign currency translation methods and functional currencies.

## EFFECT OF SFAS NO. 52 ON REPORTED RESULTS

Fifty of the Fortune 500 corporate 1981 annual reports were randomly selected for analysis. Twenty-eight of the fifty multinational corporations elected to use SFAS No. 52, although it was not required until 1983.

In 1981, many multinational corporations reported translation losses. This resulted from the U.S. dollar strengthening in value against foreign currencies, partially due to the disinflation the United States experienced. Under SFAS No. 52, the translation losses were designated as unrealized and were reported in the balance sheet, thereby increasing EPS and return on investment.

As indicated in Exhibit 3, 75 percent of the twenty-eight corporations that implemented SFAS No. 52 reported that EPS was affected by the translation adjustment. Only one of the these corporations reported a decrease in EPS due to implementing SFAS No. 52.

An example of increased EPS is Chromalloy American, whose EPS increased by 67 percent from 26 to 65 cents due to reporting

**Exhibit 3. Effect of SFAS No. 52 on Reported EPS**

| Percentage increase to EPS | Corporations reporting change Number | Percentage |
|---|---|---|
| Less than 1% | 2* | 9 |
| 1-10% | 6 | 26 |
| 11-20% | 6 | 26 |
| 21-30% | 1 | 5 |
| 31-40% | 2 | 9 |
| 41-50% | 1 | 5 |
| 51-60% | 2 | 9 |
| 61-70% | 1 | 5 |
| Over 71% | | |
| TOTALS | 21† | 100 |

* One corporation experienced a reported .007 decrease in EPS due to a net translation gain being included in owners' equity per SFAS No. 52, instead of an increase to net income per SFAS No. 8.

† Twenty-eight corporations used SFAS No. 52, but seven reported that the change in EPS due to translation adjustments was immaterial. These seven corporations are excluded from this analysis.

net translation losses in owners' equity instead of in the income statements.

Vulcan Corporation was the only corporation in the sample that reported a decrease in EPS from implementing SFAS No. 52. Vulcan's EPS trend was not, however, affected by this. In 1979, Vulcan's EPS was $5.48, in 1980 $6.04, and in 1981, even with the 5 cent per share decrease caused by using SFAS No. 52 instead of SFAS No. 8, EPS was $6.76. Vulcan reported a 12 percent increase in EPS even after recognizing the translation net gain in the balance sheet instead of the income statement. Had Vulcan used SFAS No. 8 instead of SFAS No. 52, EPS in 1981 would have been $6.81 (a 13 percent increase over 1980) instead of only $6.76 (a 12 percent increase over 1980).

Only five of the twenty-eight corporations studied restated prior years' financial statements when they implemented SFAS No. 52. Four restated only 1979 and 1980, while International Telephone & Telegraph restated 1976, 1977, 1978, 1979, and 1980. This inconsistency in reporting practices among the twenty-eight corporations does little to enhance comparability of financial statements.

### SFAS NO. 52 TRANSLATION ACCOUNT TITLE

Of the twenty-eight corporations electing to use SFAS No. 52, only twenty-two included a separate owners' equity account for the translation gains or losses. Twenty-one percent of the corporations did not report translation gains and losses in a separate account in the balance sheet as suggested by SFAS No. 52. This lack of disclosure was generally justified by reference to immateriality or insignificance. When SFAS No. 52 was implemented, a corporation was supposed to adjust the beginning balance of retained earnings for translation gains and losses recognized in net income during prior periods. The current year's translation gains and losses were to be disclosed in a separate balance sheet account.

SFAS No. 52 allows translation gains and losses to be reported in (1) a separate balance sheet account, (2) the income statement, (3) retained earnings, or (4) a combination of the previous three options. SFAS No. 52 is flexible and allows considerable variation in measuring and reporting translation adjustments.

For example, Interco corporation disclosed that it wrote translation gains and losses off directly to retained earnings, thus explaining why there was no separate account for translation adjustments. The direct write-off to retained earnings violated the

"clean surplus concept." Reporting translation gains and losses in a separate balance sheet account indicates that the translation gains and losses were not expected to affect cash flows to stockholders. SFAS No. 52 suggests that foreign operations be viewed as "islands" separate from the U.S.–based parent corporation. The economic, political, and social conditions of the foreign subsidiary result in the "net investment" rather than the individual assets of the subsidiary being exposed to risk. The translation gains and losses are not thought to affect cash flow to the U.S. parent or its stockholders directly. If cash flow is not affected, cash dividends are not affected. A direct write-off of translation gains and losses to retained earnings contradicts the concept that these gains and losses do not affect possible dividend distributions. Of the 21 percent of the corporations that used SFAS No. 52 but did not disclose translation adjustments in a separate account in the balance sheet, only Interco indicated how the translation adjustments were recorded.

Marriott Corporation is an example of a nondisclosing company. This diversity in reporting pulls financial reporting farther from the objectives of the FASB's Concept Statements. Comparability and usefulness of financial statements to investors is jeopardized by SFAS No. 52.

Twenty-two of the corporations did include a translation adjustment account in their balance sheets, but fourteen different account titles were used (see Exhibit 4). The two most popular account titles were accumulated translation adjustments and cumulative translation adjustments. In 93 percent of the titles, the word "translation " is found. The title "currency exchange effects" was the only title without the word "translation" in it.

SFAS No. 52 does recommend two different titles: at paragraph 142, "equity adjustment from foreign currency translation," and at various paragraphs, such as 31, 34, 35, and 46, the equity account is referred to as "cumulative translation adjustments." SFAS No. 52 does not mandate a single account title as is obvious by the results reported in Exhibit 4.

Account title choices should not consume enormous amounts of energy, but consistency is helpful in financial statement analysis. Relative uniformity exists for account titles referring to cash, accounts receivable, accounts payable, retained earnings, and others. Why is there so much creativity when reporting foreign translation adjustments? Creativity and diversity mark a consistent characteristic of accounting for foreign-currency–based operations.

**Exhibit 4. Balance Sheet Account Titles Used for Translation Adjustment**

| Number of corporations using title | Account title used |
|---|---|
| One | Adjustment-foreign currency translation |
| One | Accumulated foreign currency translation adjustments |
| One | Accumulated foreign currency translation adjustment |
| Three | Accumulated translation adjustment |
| Two | Cumulative currency translation adjustment |
| One | Cumulative currency translation adjustments |
| One | Cumulative translation adjustment |
| Three | Cumulative translation adjustments |
| One | Currency exchange effects |
| One | Deferred foreign currency translation adjustments |
| Two | Equity adjustment from foreign currency translation |
| Two | Foreign currency translation adjustment |
| One | Net foreign currency translation adjustment |
| Two | Translation adjustment |

Six of the twenty-eight corporations disclosed (in footnote discussion) that they had translation adjustments but did not report the amount in a separate balance sheet account. Only one of the six disclosed how it disposed of the translation adjustment (i.e., wrote it off directly to retained earnings).

**Exhibit 5. Corporations Using SFAS No. 8**

| | Earnings per share change from previous year | |
|---|---|---|
| Nature of translation adjustment reported | Number of corporations reporting | |
| | Increase | Decrease |
| Loss | 5 | 3 |
| Gain | 4 | 5 |
| Not disclosed | 2 | 3 |
| Total | 11 | 11 |

## CORPORATIONS USING SFAS NO. 52

Staying with the accounting standard that has been in effect since January 1976 might not appear to be very creative, but it does add to the diversity in financial reporting when a majority (56 percent, i.e., 28 of the 50 Fortune 500 corporations studied) used SFAS No. 52. Exhibit 5 indicates why 44 percent (22 of the 50 Fortune 500 corporations studied) chose to stay with SFAS No. 8.

Excluding the five corporations that did not disclose the translation effects of their foreign operations, 53 percent (i.e., 9 out of

17) of the sample (the 22 Fortune 500 corporations studied which stated with SFAS No. 8) reported increased EPS due to using SFAS No. 8 rather than SFAS No. 52. With SFAS No. 8, translation gains and losses were included in the income statement, whereby gains increased EPS and losses decreased EPS. Fifty-three percent of the corporations reported translation gains, including Eastern Airlines, which reported a $6.1 million translation gain for 1981, an increase in EPS by 24 cents. Even with the 24 cent increase, Eastern reported a loss of $3.44 per share for 1981. Other examples of corporations which enhanced reported EPS by using SFAS No. 8 are Phillips Petroleum, Singer, and Shell Oil, which reported translation gains of $42 million, $4.5 million, and $3 million, respectively.

As these corporations and Exhibits 3 and 5 illustrate, corporations reporting substantial translation gains elected to use SFAS No. 8, and those with substantial losses elected to use SFAS No. 52. Only one of the corporations using SFAS No. 52 reported a translation gain; that was Vulcan, discussed previously. Fifty-three percent of the corporations using SFAS No. 8 reported translation gains, while 47 percent reported translation losses. Despite reporting translation losses, 63 percent of these corporations reported larger 1981 EPS over 1980 EPS. Those using SFAS No. 8 and reporting translation losses and declining EPS from 1980 to 1981 were corporations such as Marathon Oil, Mobil, and Pennzoil. Had Marathon implemented SFAS No. 52, reported EPS for 1981 would have been closer to the $6.27 reported in 1980 than the $5.82 actually reported in 1981.

## PREPARERS' VERSUS USERS' NEEDS

The FASB's Concept Statement No. 1 states that financial statements are a principal means of communicating accounting information to those outside an enterprise. The needs of the users of financial statements are to take priority over the needs of the preparers of financial statements, yet in paragraph 148 of SFAS No. 52, the FASB expresses more concern for the preparer than for the user of financial statements. The needs of financial statement users are not even mentioned.

Despite the FASB suggestion that the effect of adopting SFAS No. 52 be disclosed, several corporations did not disclose the effect. Kidde Corporation, Polaroid, Warner Communications, and Zenith justified nondisclosure by referring to immateriality of the effects or suggesting that the effects were not significant.

Interlake Corporation claimed that the adoption of SFAS No. 52 had minimal effect on 1981 net income; therefore, it did not disclose in the footnote discussion the change to net income or other effects of using SFAS No. 52 versus SFAS No. 8, yet Interlake reported a net translation loss of nearly $13 million in the balance sheet account entitled "Accumulated Foreign Currency Translation Adjustments." Also reported elsewhere in Interlake's financial statements was an adjustment from translating foreign currency financial statements amounting to a loss of nearly $16 million. Disclosure and discussion of a translation adjustment ranging somewhere between a loss of $13 and $16 million would have aided users in understanding Interlake's financial statements.

## SUMMARY

SFAS No. 52 is new and differs from SFAS No. 8, but it is not necessarily better. This paper has presented problems surrounding foreign currency translation in multinational financial accounting and reporting, based on a study of 50 of the Fortune 500 corporations. The results of this study indicate that management preferred the accounting standard that increased EPS. The majority of the corporations implementing SFAS No. 52 reported translation losses, whereas the majority of those staying with SFAS No. 8 reported translation gains. This resulted in higher EPS because losses were reported in the balance sheet and gains were reported in the income statement.

Of those implementing SFAS No. 52, some corporations set up a separate balance sheet account for translation adjustments, while others either wrote translation adjustments off directly to retained earnings or did not disclose how the adjustments were recorded. Some corporations restated prior periods and some did not.

SFAS No. 52 has added to the diversity of financial reporting. Time will tell if this diversity created more progress than problems.

# *The Impact of Accounting Practices on Tax Revenue in Syria*

ADNAN ABDEEN*

Several factors contribute to economic development and growth, such as the quality of the labor force, educational standards, technology, and the amount of capital and natural resources. Capital is recognized as one of the most important factors in assisting economic growth. Tax policies are also known to influence such growth because of the important role they play in stimulating capital formation.

In developing countries, the role of taxation is very significant in the process of capital formation and technological change because of the extremely low levels of income and savings which serve as the source of capital formation. Walter W. Heller elaborated on this condition in the developing countries:

> These countries are caught in the vicious circle of extreme poverty, a circle providing from low incomes to high consumption propensities to low savings to low rates of capital formation to a continuation of low levels of income. To break out of this circle, apart from foreign aids, calls for vigorous taxation and government development programmes: on this point, expert opinion is nearing a consensus.[1]

The importance of taxation in developing countries is emphasized as a way of breaking the vicious circle of poverty, yet low income groups, which constitute the majority in the developing countries, may not have the ability or the desire to save, regardless of the

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[1] Walter W. Heller, "Fiscal Policies for Underdeveloped Countries," in *Readings on Taxation in Developing Countries*, ed. Richard M. Bird and Oliver Oldman (Baltimore: Johns Hopkins University Press, 1967), 7.

taxation structure. Experimentation with various plans to encourage personal savings among the low income groups has proven very costly and ineffective, even in developed countries.[2] In general, the tax system attempts to promote savings and capital formation by limiting consumption, especially of luxury goods. The individual must choose whether to consume and pay taxes or to save and not pay them. Both of these choices facing the individual motivate savings. In the first case, the case of consumption, tax revenues are used to finance economic and/or social projects while keeping aggregate demand within the limited national capacity. For this reason, the tax system should not make consumption prohibitive by heavy levies of taxation. In the second case, the case where the individual abstains from consumption and saves, the problem of channeling saving into productive investment is present. Funds can be kept idle if the saver hoards because of a lack of investment opportunities. For this reason, reliable and efficient banking systems are needed to attract savings and to channel them into investment in preferable development projects. A government can finance its projects by creating money rather than by imposing taxes and reducing consumption, although this is done at the risk of inflation.[3]

In addition to influencing capital formation, a tax system can affect economic development in other ways. The tax system can be used to curb imports of non-essential goods and to provide incentives for the importation of capital goods. Both measures encourage and protect domestic, private, and public industries from foreign competition.[4]

The tax system may also direct private investment toward certain projects more preferable for economic development. It can also cause the reallocation of national resources by discouraging investments in assets not conducive to economic development.[5]

Another important contribution of a national tax system stems from its ability to redistribute income and wealth.[6] In many countries, the maldistribution of income and wealth has caused

[2] Richard M. Bird, *Taxation and Development* (Cambridge, Mass.: Harvard University Press, 1970), 36.

[3] John F. Due, "Requirements of a Tax Structure in a Developing Economy," in *Readings on Taxation in Developing Countries*, ed. Richard M. Bird and Oliver Oldman (Baltimore: Johns Hopkins University Press, 1967), 33.

[4] International Bank for Reconstruction and Development, International Development Association, *Taxable Capacity in Developing Countries* (Report No. EC-103, February 1962), 38.

[5] Nicholas Kaldor, "Taxation for Economic Development," *Journal of Modern African Studies* (January 1963), 7-11.

[6] Ibid.

unrest and political upheaval. This condition leads politicians, in some countries, to resort to the nationalization of private industries and expropriation of wealth. This could possibly be avoided with an efficient tax policy and administration. When tax policies are directed to encouraging economic development, funds can be released for necessary social services, and the nationalization of private enterprises can be avoided.

Tax policies are also important in developing countries because of the difficulty in attracting foreign investors and lenders to participate in needed economic projects. A reliable and sound fiscal policy could assist in increasing the amount of foreign capital, especially development loans. This aspect is less significant, however, than some other factors. For example, the threat of communism, nationalization, economic and political instability, and a weak legal framework for the Middle Eastern economies have been obstacles that have slowed down the inflow of direct foreign investment.[7]

The impact of the accounting practices on tax revenue in Syria is the specific focus of this study. The different types of tax revenue are analyzed and evaluated, and the role of the accounting profession in the success of the tax system is assessed. In conclusion, the dependence of the tax system on the efficiency and greater involvement of the accounting profession is recognized.

## ANALYSIS OF THE SYRIAN TAX SYSTEM

### Sources of Government Revenue Receipts

In the development program of an economy with a large public sector, such as that of Syria, the revenue system constitutes the principal instrument for the mobilization of domestic financial resources. The principal sources of revenues in Syria are taxes, surpluses of the public sector's enterprises, trust and pension funds, and foreign and domestic loans. The revenue system, as part of overall fiscal policy, is an important element in the overall plan to enhance economic development and redistribute income.

A general view of the revenues provided by taxes and other sources can be obtained by examining the Central Government Receipts for 1980 compared with those for 1970. The 1980 total revenues from taxes, fees, and duties (14.6 percent of total revenue receipts — see Exhibit 1), is much less than in 1970 when those

[7] Taghi T. Kermani, *Economic Development in Action: Theories, Problems, and Procedures as Applied in the Middle East* (Cleveland, Ohio: World Publishing, 1967), 84.

**Exhibit 1. Consolidated Budget Estimates of Government Receipts 1980 (in Millions of Syrian Pounds)**

| Type of Revenue | Amount* | Per Cent |
|---|---|---|
| Revenue from Taxes, Fees, and Duties | 4,213 | 14.60 |
| Revenue from State Property | 48 | .20 |
| Surplus Liquidity of Economic Establishments | 1,111 | 3.80 |
| Surplus of Public Sector Enterprises | 7,885 | 27.30 |
| Other Revenues (largely Trust and Pension Funds) | 10,328 | 35.70 |
| Domestic Loans | 2,999 | 10.40 |
| Credit Facilities | 2,319 | 8.00 |
| Total Revenue Receipts | 28,903 | 100.00 |

* Rounded to the nearest million Syrian Pounds

**Source:** Syrian Arab Republic, Central Bureau of Statistics, Statistical Abstract, 1980 (Damascus, July, 1980), pp. 497-500.

sources contributed 30 percent of the total revenue receipts.[8] This reduction is partly attributable to the decline in fee revenue from petroleum pipelines, which amounted to 8 percent of the total revenue receipts in 1970 compared to only .45 percent of the total revenue receipts in 1980.[9]

### Sources of Tax Receipts

The main sources of tax receipts are (1) income and production taxes, (2) tax on capital and wealth, (3) tax on expenditure and consumption, (4) fees and stamps, and (5) revenue from petroleum pipelines (see Exhibit 2). These sources are examined in this paper with particular emphasis on the income and production tax because of its close relationship to the field of accounting. Even though direct taxes (income and production taxes and taxes on capital and wealth) amounted to slightly more than 45 percent of the total tax revenue in 1980, there was a heavy reliance on indirect taxes (taxes on expenditure and consumption) which represent 40.33 percent of total taxes. Next in importance was the revenue from fees and stamps. The remainder represented the revenue from petroleum pipelines. Each source of tax receipt will now be explained in more detail.

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[8] The Syrian Arab Republic, Central Bureau of Statistics, *Statistical Abstract, 1971* (Damascus: Government Press, 1971), 292-95.

[9] Due to the fact that revenue from petroleum pipelines is determined by bargaining representatives and established by contracts, this revenue used to be classified by the Syrian authorities as non-tax revenue. See Syrian Arab Republic, Ministry of Planning, *Statistical Abstract* (Damascus: Government Press, 1967), 327-28. For more information on revenue from petroleum pipelines, see the following section.

**Exhibit 2. Estimated Revenues from Taxes, Fees, and Duties**
**1980**
**(in Millions of Syrian Pounds)**

| Type of Revenue | Amount* | Per Cent |
|---|---|---|
| –Income and Production Taxes | 1806 | 42.86 |
| –Tax on Capital and Wealth | 96 | 2.28 |
| –Tax on Expenditure and Consumption | 1699 | 40.33 |
| –Fees and Stamps | 482 | 11.44 |
| –Revenue from Petroleum Pipelines | 130 | 3.09 |
| Total Revenues from Taxes, Fees and Duties ..... | 4213 | 100.00 |

* Rounded to the nearest million Syrian Pounds
**Source:** Syrian Arab Republic, Central Bureau of Statistics, Statistical Abstract, 1980 (Damascus, July, 1980), pp. 497-499

**Income and production taxes.** The Syrian income tax is regulated by Legislative Decrees Number 85, May 31, 1949, as amended.[10] The income tax is based on the scheduled tax concept rather than the general income concept. Tax is levied on income derived from the following four categories: (1) income from industrial, commercial, and noncommercial trades and professions; (2) salaries and wages; (3) income from working capital; and (4) income from real estate.

The first category of income (from industrial, commercial, and noncommercial trades and professions) is subject to graduated tax rates ranging from 11 to 66 percent.

The law distinguishes three classes of taxpayers. The first class (Class I) includes corporations, partnerships, and large proprietorships. This class is taxed on the basis of "actual net income."[11] The second class (Class II) includes mainly professionals and persons who own medium or small-sized businesses. This class is taxed on the basis of "estimated net income."[12] The third class (Class III) includes all other persons who are engaged in industrial, commercial, or noncommercial business activities. This class is assessed a lump sum tax computed on the basis of the previously mentioned rates.[13]

No uniform minimum amount exempt from taxation applies to all persons and business institutions included in Classes I and II. Corporations are not allowed any exemption, but each person is

[10] S.A.R., Ministry of Finance, *Income Taxation* (Damascus: Government Press, 1970), 3. The latest amendment was made by Legislative Decree Number 31, 7 December 1965.
[11] Ibid., 3-4.
[12] Ibid., 60.
[13] Ibid., 42.

allowed a personal exemption of SP 480 for a wife, SP 480 for the first child, and each additional child is granted a SP 20 increase over the amount allowed for the preceding child. In the case of a collective partnership, exemptions are extended to each partner, but in the case of a limited partnership, only the responsible party may benefit from these exemptions. Moreover, the total amount exempted in any partnership may not exceed SP 9,000.[14] Each person in Class III is exempted from the income tax if his or her income does not exceed SP 1,800. If the person's estimated income exceeds SP 1,800, however, the taxpayer is allowed SP 1,200 minimum exemption. In the case of partnerships, each partner may benefit from the SP 1,200 exemption.[15]

The second category of the scheduled income tax is the tax on salaries and wages. All salaried persons and wage earners, whether they are in the service of the government or business, are subject to a graduated income tax ranging from 5 to 15 percent.

The third category of the scheduled income tax is the tax on working capital. Income received from stocks, bonds, bank deposits, personal loans, lotteries, and other items of circulating capital, whether of national or foreign origin, is subject to a flat rate of 7.5 percent. No personal exemption is allowed for this kind of income. Incomes received from certain savings accounts and investment certificates, however, are exempted from this tax.[16]

The fourth category of the scheduled income tax is the tax levied on income derived from real estate. This tax is mainly applicable to non-agricultural buildings and lands. The income derived from a building and its rental value forms the base of taxation. The rental value is determined by the Ministry of Finance on the basis of the estimated value of the property: 5 percent for residential and 7 percent for commercial. These values are to be estimated by the ministry every ten years. However, the last estimation was made in 1965. The actual or estimated gross rental value is subject to graduated tax rates. These rates range from 14 percent on amounts less than SP 1,750 to 60 percent on amounts over SP 20,000. In recent years, however, the government doubled the amount of this tax to the tenants because such a practice conflicts with the rent control laws. As far as the residential property is concerned, any increase in this tax is unrealistic because it eventually worsens the inflation problem and reduces the general

[14] Ibid., 13-14.
[15] Ibid., 43-44.
[16] Ibid., 33-34.

depressed income of the majority of the middle and lower class tenants.[17]

Production tax is related to income levied from farm and animal husbandry operations. Due to difficulties in arriving at such income, these taxes are assessed only on the number of livestock, the agricultural production, and the cotton exportation. Agricultural production excludes the production of fruits, vegetables, grain, and tobacco.[18]

The rates on livestock and cotton exportation are set by law on a unit basis. Agricultural production tax is levied, however, at a flat rate of 9 percent on the wholesale price.[19]

**Tax on capital and wealth.** This tax is assessed on unimproved land, inheritance and gifts, and property transfers. The tax rates on unimproved land located in municipalities range from 6.5 to 12 SP per thousand on the fraction of capital value.[20]

The tax on inheritance and gifts was set in 1952 and applied to all rights, personal property, and real estate being transferred to other parties by inheritance, will, gifts, or any other means of transfer that do not involve compensations. The inheritance and gift tax rates, which were substantially increased in 1965, vary with the degree of kinship of the heirs to the deceased.[21] The tax on property transfer varies with the value of the property.

**Tax on expenditure and consumption.** This is an indirect tax levied on a variety of domestic and foreign commodities. The rates on the commodities, set by law and determined according to their nature, are set on a unit basis, not on the current value of the commodity or expenditure.[22] However, custom duties are in most instances based on the value of goods.[23] Certain rates (on textiles, beer, and carpets) are based on weight, volume, or surface area, respectively.[24]

**Fees and stamps.** The law specifies two stamp rates, the first of which is proportional and applies to bills of exchange and deeds.

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[17] The information in this section is based on an informal interview with employees of the Syrian Tax Department conducted in Damascus by the author, 24 October 1980.

[18] Rafik Koudsi, Syrian Tax Department, letter to the author.

[19] Ibid.

[20] Ibid.

[21] Ibid.

[22] M.A.S.M. Futayyeh, "Sales Tax for Economic Development: Syria as a Case Study" (Ph.D. dissertation, University of Oklahoma, 1970), 87.

[23] The value of the goods is based on the official rate of exchange, which was SP 3.95 for $1.00 in 1980.

[24] "Industrial Policies: The Experience of the Syrian Arab Republic," *The Arab Economist* (April/May 1971), 17.

The second is fixed and applies to petitions.[25] Other fees are levied on services offered by governmental administrative organizations. **Revenue from petroleum pipelines.** The revenue received from petroleum pipelines was based on a fee set through bargaining sessions between the government authorities and representatives of the Iraq Petroleum Company[26] and the Trans Arabian Pipeline for the privilege of using the Syrian territory and for other services offered by the Syrian government.[27] The amount of source of revenue has fluctuated over the last ten years from 212 to 130 million SP mainly because of oil flow disruption due to failure to renew contracts, political differences between Iraq and Syria, war with Israel, the recent Lebanese war, and the Iraqi-Iranian war.[28]

The revenue from petroleum pipelines is difficult to determine because it is supposedly based on the income resulting from the uses of the pipelines. The operation is rather complex, and the bargaining parties have different viewpoints on the methods of calculating the amounts of revenue and expenses. This income (transit fee) was never subjected to the Syrian income tax law.[29]

## EVALUATION OF THE SYRIAN TAX SYSTEM

Tax policies in Syria have undergone some changes as indicated by the numerous legislative decrees passed by the government in recent years. Some were minor rate changes, while others change tax techniques and procedures in assessments and collection of taxes. These changes failed to increase the proportion of national income collected in taxes. The ratio of tax revenues to gross domestic product ranged between 15 and 17 percent between 1966 and 1970.[30] In 1978 and 1979, the same ratio dropped to

[25] Futayyeh, "Sales Tax for Development," 87-88.

[26] The IPC was nationalized by the Iraqi government in 1972.

[27] The IPC pipeline passes through the Syrian territory from Kirkouk, Iraq, to Banias, Syria, and Tripoli, Lebanon, while the TAPline starts in the eastern province of Saudi Arabia and ends in Sidon, Lebanon, passing through Jordan and Syria.

[28] For detailed information, see U.S. Department of Commerce, *Foreign Economic Trends and Their Implications for the United States* (Washington, D.C.: Government Printing Office, 1980), 7, and "News in Brief — Saudi Arabia," *Petroleum Economist* (February 1979), 77.

[29] Business Institutions Graduates Association, *The Second Conference on Mobilization of Economic Resources for Development and Defense* (Damascus: Tarabishi Press, 1971), 622.

[30] Based on calculations of data extracted from S.A.R., *Statistical Abstract 1971*, 455-59, and Business Institutions Graduates Association, *The Second Conference*, 585.

approximately 12 percent.[31] This ratio is similar to most developing countries and is very low compared to advanced industrial countries. Furthermore, the taxing yield failed to match government expenditures. The ratio of tax revenue to total budget receipts declined from 43.5 percent in 1966 to 30 percent in 1979 and to 14.6 percent in 1980.[32]

Many factors influence the behavior of the total tax receipts in relation to the gross domestic product and the total government expenditures. A full discussion of this complex relationship is beyond the scope of this study. Some of the noticeable factors, however, include the heavy reliance on indirect taxes and the incomplete application of the income tax system. The amount of indirect taxes substantially exceeds the amount of income tax derived from trade, industry, and professions because of the inherent inflexible nature of the indirect tax system. In most cases, the indirect tax is levied on the unit basis rather than the value or price of the commodity. Moreover, the import duties on capital goods are either non-existent or held to a minimum. These goods contribute to the increase in gross domestic product, but not to the total tax revenue.

The real estate tax, another indirect tax, is based on the rental value of the property, which is supposed to be revised periodically. Since such revision is not made for reasons stated earlier, this tax becomes rigid and does not result in a relative increase in the total tax revenue.

The income tax system is not fully applied. Factors that explain the situation include the exemption of many wage earners from income taxes, the long-range nature of the effect of tax incentives, and the prevalence of tax evasion.

Many wage and income earners are either exempt from income tax or cannot be reached. For example, all armed services personnel and members of the clergy are exempt from salary and wage taxes. Most farmers are not taxed because of the obstacles facing the authorities in securing compliance.[33]

The income tax system provides adequate incentives for risk taking, expansion, and other operations conducive to economic

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[31] Based on calculations of data extracted from S.A.R., *Statistical Abstract 1972*, [illegible], Business Institution Graduates Association, *The Second Conference*, 1971, 5576-585, and *Statistical Abstract 1980*, 593-600.

[32] Based on calculations of data extracted from S.A.R., *Statistical Abstract 1980*, 578-79.

[33] Business Institutions Graduates Association, *The Second Conference*, [illegible].

development.[34] The benefits of these incentives are realized in the total domestic product in the short run. Their effects on income taxes, however, are of a long-range nature.

Income tax evasion is prevalent due to difficulties in administration and implementation of the tax system. Major reasons for this situation include the lack of adequate accounting records and supporting documents, the shortage of tax auditors, the lack of tax education, a social consciousness, and the inefficiency of tax administration.

The potential for an increased yield of income tax revenue is possible and essential if such a tax is to play a larger role in economic development. Improvements in statistical and accounting techniques are gaining greater attention from government authorities. This is not to imply that tax administration and compliance are greatly improved over what they once were, but the way for such improvement is being prepared. Further, the Syrian government is vigorously attempting to reduce illiteracy and to improve the quality of education. Such a policy has a long-range effect on taxpayers. The author believes, however, that the most important factor in the improvement of the income tax role in the economic development of Syria is its relationship to the success of an organized accounting profession and the improvement of accounting and auditing practices.

## THE ROLE OF ACCOUNTING IN THE DETERMINATION OF TAXES

In their association with business operations, accountants are involved directly or indirectly with most taxes. The determination of income derived from business activities, industry, trade, and the profession, however, is one of their major tasks. The role of accounting and accountants in the success of income taxation and compliance of taxpayers can be assessed by considering the relationship of income taxes and the accounting records, the determination of the taxable income, and the involvement of the professional accountants in the preparation and review of tax returns.

### The Accounting Records and Income Taxation

The relationship between income taxation and the field of accounting stems from the necessity to keep adequate records for the determination of business income. Adequate records are used to levy taxes, report the financial condition of businesses, and

[34] Ibid., 610-12.

provide reliable evidence of conducting honest business transactions. The records also may be used in courts in case of disputes and may save the business from bankruptcy in case of business failure.[35]

The Syrian Commercial Law requires businesses to keep at least a general journal, a correspondence book, and inventory records. Moreover, other supporting records, such as the ledger, record of shipments received, cash on hand book, and records of notes receivable and notes payable, were recommended.[36]

The Syrian tax law provides that every taxpayer subject to the income tax should keep orderly accounting records that show his or her actual profit.[37] Taxpayers who are subject to taxation on the basis of actual net income (Class I) should keep adequate records that enable them to present to the Tax Department the following documents: (1) income tax return, (2) profit and loss statement, (3) balance sheet, (4) detailed schedule of depreciation, and (5) schedule of personal exemptions, if applicable. In case of a tax audit, the taxpayer should present to the tax auditor all supporting documents, such as inventory valuation sheets, copies of correspondence letters, notes receivable and payable, and other documents, that support all statements and schedules accompanying the tax return.[38] Taxpayers who are subject to taxation on the basis of "estimated income" (Class II) should keep records of their sales and operating expenses.[39] In some cases, records of purchases instead of sales are sufficient for the determination of the estimated income.[40]

Taxpayers who are subject to lump sum taxes (Class III) should present information to the tax authorities regarding any changes in operations. None of the required information involves any accounting records or financial data relating to the results of operations or the financial position.[41]

The tax law permits taxpayers in Classes II and III to change their status to Class I and to be taxed on the basis of their "actual net income" if adequate records are maintained. This change is possible only if it can be demonstrated to the tax authorities that

[35] Nihad Sibaee and Rizkalla Antaky, *Briefs in Commercial Law* (Damascus, Syria: University of Damascus Press, 1961), 61-62.
[36] Ibid., 62-67.
[37] S.A.R., *Income Taxation,* 7.
[38] Ibid., 10.
[39] Ibid.
[40] Rafik Koudsi, personal letter to the author.
[41] S.A.R., *Income Taxation,* 48.

the records are adequate to report the "actual profits." In recent years, several professionals and specialized trades have been forced to change from Class II to Class I, and accordingly are to be taxed on the basis of actual profits after they present adequate records.

The adequacy of accounting records for use as evidence of business transactions in case of legal dispute is reached by responses of statutory accountants to a questionnaire dealing with this issue.[42] Sixty-nine percent of the respondents considered the records required by law to be sufficient, 23 percent considered them insufficient and recommended additional records, and 8 percent expressed no opinion. Most of the recommended additional records were related to cost of production and sales and inventory valuations.

Some of the reasons for the lack of adequate records stated by the respondents include: (1) fear of revealing information to public authorities, (2) tax evasion, (3) lack of accounting education and consciousness, (4) leniency of the government, and (5) lack of influential accounting organizations that push for better tax statutes and more effective methods of assessments and collections.

Most businesses register their accounting records, especially the general journal, at the commercial courts. This registration is not required by law if the business is officially registered at the local Chamber of Commerce. The value of this practice is not certain.

Maintenance of proper accounting records differs with the nature and size of the business. The respondents to the questionnaire indicated that proper records are prevalent in manufacturing, wholesaleing, and import and export businesses. Moreover, corporations, especially public corporations, maintain better records than partnerships or sole proprietorships. Small businesses, such as retailers, professionals, farmers, craftsmen, and peddlers, keep poor or no records.

### Determination of Taxable Income

The concept of taxable income as specified by the Syrian tax law is rather general in spite of the definition of "net income." This law states that "net income is composed of all revenues subject to the income tax less all burdens and expenses necessitated by the operations of the business."[43] Taxpayers included in Class I will be taxed on the basis of "net income" as specified by the tax law.

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[42] Adnan Abdeen, "The Role of Accounting in the Economic Development of Syria" (DBA dissertation, Mississippi State University, 1974), Appendix B, 315-22.

[43] S.A.R., *Income Taxation*, 7.

Furthermore, the tax law states that the accrual method is to be used when determining revenues, but it does not specify the method of determining the cost of sale. Burdens and expenses include (1) the actual rent expense for the place of business or, in case of ownership, estimated rental value used by the real estate tax assessors; (2) salaries, wages, and any additional payments paid in lieu of services rendered to the taxpayer's business; (3) employee's insurance expense; (4) allowances for payment of employee's job terminations, pensions, and emergency compensations as specified by labor law; (5) depreciation allowances acceptable by common practice of the related business or profession; (6) taxes and fees due and paid during the year, with the exception of the income tax; and (7) any amount contributed to the Syrian armed forces, schools, and public and private hospitals.[44]

The determination of the taxable income of the other two classes of taxpayers is based on special economic analyses, such as profit averages or percentages classified by various groups of business in several kinds of trade, industry, and professions.[45] The tax law specified that the gross amounts of revenue realized during the year should be the base of determination of estimated net income for Class I. The rate of gross profit on the gross revenue will be set annually by special committees of the Tax Department. Once the amount of estimated gross profit is established, the actual operating expenses are subtracted from it to determine taxable income.[46]

Class III taxpayers are subjected to a lump sum tax. Professionals and craftsmen in this class are divided into twenty groups, and each group is assessed a fixed amount. The amount of taxes levied on this class can be changed every five years by a special review committee of the Tax Department. The bases used to compute the tax are the size of the business, the location, and the estimated number of customers. For seasonal businesses, the number of workdays is considered.[47]

The concept of taxable income in the Syrian tax law as applied to all three classes of taxpayers is not definite and clear. For Class I, the general definition of taxable "net income" leaves many accounting issues to the discretion of accountants, tax assessors, and auditors. The determination of the gross profit ratios for Class

[44] Ibid., 7-8.
[45] Koudsi letter.
[46] S.A.R., *Income Taxation,* 61.
[47] Ibid., 45-46.

I adds to the complexity of determining a fair taxable income that reflects the annual results of operations. Certain taxpayers may qualify for or exceed the ratios set by the authorities. The estimation of taxable income in Class III and the assignment of a taxpayer to one of the twenty groups involves an arbitrary assessment. The worst aspect of this tax is that once the taxpayer is assigned to a group, he or she must pay the assessed taxes for five consecutive years as long as the taxpayer remains in business, regardless of the level of the operations and the amount of profit derived from them.

Basically, the accounting and tax concepts of determining revenues, costs, and expenses follows the accrual method of accounting. In many cases, however, the treatment of these items on the financial statement differs from that on the tax return. An examination of several financial statements and other sources revealed that the most commonly encountered situations are these:

1. Depreciation on real estate is not a deductible expense on the tax return. Assessed rental value used in the determination of real estate taxes replaces this amount for tax purposes.
2. The religious tax, Zakat, is treated as an expense on financial statements, but it is not an acceptable deduction for tax purposes.
3. No taxes, with the exception of income taxes, are allowed as deductions on the tax return unless they are actually paid.
4. Interest expenses are allowed deductions if they relate to business loans. Interest income on loans made to others should be differentiated from business-related loans and nonbusiness loans. The interest income from nonbusiness-related loans would be subject to taxes on circulating capital and should not be included in the revenues of the business. If the interest income is business related, however, it should be offset with interest expense and the difference should be reported on the tax return.[48]
5. Double taxation is not allowed by law. For this reason, profit transferred from foreign operations, rent income, and dividend income is not included in taxable income.[49]

Most of the difference in the measurement of revenues, cost, and expenses are permanent differences and are not offset by corresponding differences in other periods.[50] This fact eliminates

[48] Noury Dabit, *Studies in Income Taxes* (Aleppo, Syria: Shark Press, n.d.), 443-44.
[49] Ibid., 252.
[50] The only issue that involves the problem of timing is that of the tax expense deduction (other than income tax) which is not allowed unless it is actually paid. This issue, which involves tax allocation, is normally ignored by Syrian accountants.

the problem of tax allocation because the amount of tax liability matches the provision for taxes. This does not mean that there are no tax disputes between the Tax Department and taxpayers. Most of the differences arise from the fact that the tax law is ambiguous and lacks clear provisions for allocation of costs and expenses. For example, the law has no instructions concerning inventory and depreciation methods and allowances for bad debts and possible losses on foreign currency holdings. Moreover, no special provision in the law exists for the treatment of capital gains and losses. Gains (or losses) are treated as addition to, or subtraction from, the business revenue.

The basic guidelines are that expenses should be necessary for the operations of the business as stated in the definition of net income. When the methods of accounting are not specified, the practices of the industry, trade, or profession should be used. This places a heavy burden on the accountants and the tax auditors to determine taxable income.

Despite the previous comments and criticisms of the legal concept of taxable income, the methods of calculating the income tax base for all three classes of taxpayers are very practical under the present business conditions in Syria. Any arbitrary determination or unfair estimate of the taxable income could be justified by keeping adequate accounting records which are necessary for the determination of "actual net income." Moreover, these records facilitate the task of auditors and contribute to the taxpayer's compliance. The need for changes, clarification, and additions to the provisions of the law, however, is apparent. This need stems from the changes in the business environment and the evaluation of new accounting practices. To satisfy this need, the Ministry of Finance continuously issues clarifications and interpretations to facilitate the task of tax declarations and collection.[51]

After Syria gained independence in 1946, the corporate form was introduced, and the free enterprise system prevailed. This condition helped generate a concept of income consistent with modern economic thought in developed nations. Basically, the concept of taxable income utilizing the accrual method of accounting, where revenues and expenses are matched, is quite sound.

The problem is that the application of the concept is hindered by the lack of formal accounting principles, auditing standards, and a code of professional ethics. This condition exists because Syrian accountants are not active in accounting research, nor are

[51] Dabit, *Studies in Income Taxes,* 423-57.

they organized professionally to influence events. However, many political, economic, and social factors, the most important of which is the growth of the public-sector trade and industrial enterprises, contributed to this situation.

### The Professional Accountants and Income Taxation

Accountants normally offer a variety of management advisory services to their business clients, including the preparation of the clients' tax returns; represent clients before the taxing authorities; offer advice on tax planning for future transactions; and aid in tax legislation and implementation of tax policies of the country.

The independent public accountants have a primary responsibility to their clients to insure that their clients pay the proper amount of tax. The second responsibility of the public accountants in tax work is to the public, whose interests are represented by the government. The two responsibilities should not conflict because the public accounting profession is pledged to high standards of morality and integrity.

The tax authorities and the accounting profession are seeking the confidence of the public because both feel that the confidence and respect of the public are invaluable assets. But before they both gain the confidence of the public, they must have confidence and respect for each other, particularly the tax authorities toward the accounting profession. This confidence is demonstrated in the Philippines, Mexico, and in a less formalized way in the United Kingdom as those national tax authorities accept tax declaration statements as correct when certified by an independent auditor.[52]

The accounting profession in developing nations has not yet reached the status enjoyed in the developed nations because the accounting profession in most of these countries is in the evolutionary stage. The lack of adequate accounting records, competent accounting manpower, formal pronouncements of accounting and auditing principles, and a formal code of professional ethics contributes to the degree of noncompliance with tax laws.

The status of the accounting profession in Syria is not different from that in other developing nations. The tax declarations of taxpayers are audited by authorities, regardless of their preparer. The tax returns of the public-sector enterprises are subject to an "office audit" by the Tax Department. All public organizations and companies have been subject to this audit since 1968. A final

[52] "Report of the Committee on International Accounting," *Accounting Review*, supplement (1972), 148.

decision on the tax assessment is reached after a thorough examination of the financial statements certified by a special government control body, General Organization of Financial Control (GOFC).[53] Before 1968, the Tax Department audited these statements even though they were certified by statutory accountants. But this practice has changed after the task of auditing the public-sector organizations was taken from the statutory accountants.

The statutory accountants who are not connected with the GOFC are involved with certification of the statements of the private-sector enterprises. They are not, however, experts on tax matters. This fact was confirmed by 70 percent of the statutory accountants who responded to the previously mentioned questionnaire. Despite this, they recommended that the Tax Department should accept the tax declaration certified by them without further tax audits. The respondents felt that this practice may induce the accounting profession to formulate strict rules for auditing and ethical practices, and compliance with the tax law may improve if the Tax Department issues directives to the statutory accountants for auditing tax declaration. The respondents stated that statutory accountants may be very instrumental in increasing trust between the Tax Department and the taxpayers and eventually improve tax consciousness and education. If these recommendations were accepted, it is felt that tax auditors would be relieved of the tremendous volume of tax returns they must audit.

These views were not shared by 30 percent of the respondents who questioned the reliability of tax declaration when signed by statutory accountants on the ground of collusion of interests, compromise of independence, and lack of strict rules of auditing and ethics. Actually, the lack of the Tax Department's confidence in the certification of the statutory accountants stems from the lack of competence among the accountants. Only 38 percent of the respondents considered the great majority of the statutory accountants to be competent and to have high moral standards; 46 percent questioned this view; and 16 percent expressed no opinion.

Vigorous application of the tax law would encourage maintenance of honest accounting records and lead to a greater compliance with the law. Accountants are able to locate the financial information needed for tax returns, advise their clients on how to utilize the tax laws fairly, and, in case of a tax audit, minimize areas of controversy with the tax auditors. Moreover, they are in

[53] S.A.R., *Income Taxation,* 16.

a position to interpret and clarify the ambiguous and incomplete Syrian tax laws. If the Syrian government involves the statutory accountants in tax work to a greater degree, the accountants will contribute to desired compliance and to the reduction of the tremendous backlog of tax audit.[54] However, the need for professional accounting competence and high professional and ethical standards still persists. These desired aspects of the profession can be achieved with better organization, but this organization will not occur unless economic activities accelerated in the private and public sectors and the need for more and better accountants becomes apparent.

### CONCLUSION AND RECOMMENDATIONS

Taxation in Syria previously constituted the second major source of government revenue. The 1980 tax revenue as a percentage of the total revenue receipts shows a sharp decline over 1970. In absolute terms, tax revenue grew substantially over the same period due to increased industrialization and growth of the economy.

The Syrian tax structure is greatly dependent on indirect taxes, but income and production taxes are second to indirect taxes in importance. As the Syrian economy grows, the need for an efficient system of taxation, especially income taxation, increases. This need is expected because imports are likely to fall as a percentage of national product and tariffs are likely to fall and reduce the dependence of the tax system on indirect taxes. To facilitate and expedite the shift of emphasis from indirect to direct taxes, technical machines will be needed. Accounting profession and accounting education should play a significant role because the relationship of accounting to taxation stems from the need for keeping adequate records of the business transactions and determining the proper basis of a variety of taxes.

Another relationship between accounting and taxation stems from the possible contribution of accountants to the elimination of tax evasion through proper recording and auditing of business transactions. The efficiency of the tax system seems to hinge on the improvement of accounting and auditing techniques and the skill provided by capable individuals. In other words, the tax system is likely to improve if better accounting practices are applied in Syria. Through this improvement, additional resources are usually created for investment in needed economic development projects.

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[54] Business Institutions Graduates Association, *Studies on Mobilization of Economic Resources for Development and Defense* (Damascus: The Jadida Press, 1969), 179.

The relationship between accounting and the tax system, particularly the income tax system, is important for the efficient and smooth operations of the machinery implementing the tax system. Improved accounting and auditing techniques contribute to proper tax assessment, the elimination of tax evasion, and the proper handling of tax incentives.

It is recommended that the Syrian government should involve the statutory accountants with tax work because they will contribute to the achievement of the organization on the part of the accountants, but unless economic activities accelerate in the private and the public business sectors, these goals will not be achieved.

# *Accounting Development in the Solomon Islands*

D. J. HARDMAN*

Contrasted but interwoven strands of national independence have changed the status and character of former colonies and dependencies in the South Pacific over the last two decades. Although constitutional evolution of the region is incomplete and mechanisms of regional cooperation are still in their early stages, a new Pacific has emerged with its own problems, style, and aspirations.

On July 7, 1978, the Solomon Islands, formerly the British Solomon Islands Protectorate (BSIP), became the eighth developing country in the South Pacific to achieve such independence.[1] At the time, the Rt. Hon. Peter Kenilorea, founding prime minister, stated:

> Regardless of our ethnic, cultural, and religious diversity, we can, from today onwards, attest to a single national identity. Today we are Solomon Islanders, and we can say with humility, but also with pride, that we all belong to one free and independent nation. . . . Our future prosperity, harmony and happiness, progress and stable society depend on the combined efforts of all of us. . . . Nationhood brings a common unity of purpose and, wisely used, this can be for the good of all.[2]

Despite the rhetoric and euphoria which signaled nationhood of the fledgling state, some subsequent changes in the Solomon Islands have tended to be more illusionary than real. This is particularly

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[1] The preceding ones were Western Samoa (1962), Cook Islands (1965), Nauru (1968), Fiji (1970), Tonga (1970), Niue (1974), and Papua New Guinea (1975). Tuvalu — formerly Ellice Islands — achieved national independence in the same year (1978) as the Solomon Islands, followed by Kiribati-Gilbert Islands (1979) and Vanuatu-New Hebrides (1980).

[2] "Speaking as Equals in the Family of Nations," *Solomon Islands News Drum* (7 July 1978), 3 and 33.

evident in the local accounting profession where standards have remained substantially the same as in the preceding BSIP era. In the private sector, the accounting profession continues to be dominated by accounting firms and, in the public sector, an imported model of government accounting is still in use. The sedulous and uncritical adoption of the conventional wisdom of the past, however, may not successfully foster the stated aspirations of ". . . prosperity, harmony and happiness, progress and stable society," and, in fact, may make the attainment of such transcendental goals even more remote.

The demand for accounting services in the Solomon Islands stems from substantial expenditure programs in both private and public sectors. Most of the local accounting activity is generated by the secondary benefits of public and rural investment. Accountants serve the needs of the private and public sectors which have grown markedly in response to (1) natural population increase (one of the highest growth rates in the world); (2) a sustained rise in local purchasing power; and (3) increased domestic and overseas investment.

## PRIVATE ENTERPRISE ACCOUNTING

Private enterprise accounting in the Solomon Islands dates from the turn of the century when, led by Lever's Pacific Plantations Ltd., British investors developed the production of copra, cocoa, rice, timber, and palm oil. The growth of private enterprise accounting was linked with the local activities of expatriate shipping and trading companies — and, more recently — with banking, insurance, and other business interests. A significant part of contemporary accounting in the private sector is associated with external trade earnings from three major primary industries, one long-established (copra) and the other two (timber and fish) relatively young but with marked export potential. Palm oil, rice, and beef are also primary industries which are attracting further local and foreign investment while there are emerging possibilities for mining (gold, silver, copper, phosphate, and bauxite) and tourism ventures.

In common with other developing countries of the South Pacific, private enterprise accounting in the Solomon Islands is the exclusive province of expatriate or non-national accountants. Most are employed by metropolitan-based accounting firms, trading companies, and banks on permanent transfers, long-term postings or

fixed-term contracts, and are members of professional accounting bodies in Britain, Australia, or New Zealand.

Four accounting firms operate in the Solomon Islands, all located in the capital, Honiara, the major port and administrative center. Three of these firms are Australian-based multinationals. The remaining one is a local independent firm, established recently by a Chinese chartered accountant previously in the employ of one of the multinationals, which is servicing an increasing number of business clients — many of them Chinese — at the expense of the multinationals. The accounting firms provide professional employment for expatriate accountants, most of whom are recruited or transferred from Britain, Australia, and New Zealand. They also provide sub-professional employment for S.I. clerks and other support staff, in common with the local banks, trading companies, and other business houses.

## ACCOUNTING STANDARDS

In the absence of any statutory or other directive to the contrary, accounting standards followed by the profession in the Solomon Islands are those promulgated by the accounting bodies in Britain, Australia, or New Zealand for the observance of their respective members. A marked degree of general uniformity exists among these metropolitan standards, which are usually not inconsistent with the pronouncements of the International Accounting Standards Committee.[3] However, such standards may not necessarily reflect the accounting needs of a newly independent and developing microstate.

In the case of a relatively young, developing microstate, such as the Solomon Islands, however, something appears to be incongruous in the adoption of imported accounting standards formulated in the context of big business, industrial society, and metropolitan government. It is conjectural whether the Solomon Islands can benefit in the same way, and to the same extent, from the accounting standards of a manifestly different type of society and economy. What may well be needed in the Solomon Islands are accounting standards more oriented toward the growth and development of a microstate, but no attempt — either in the

[3] The International Accounting Standards Committee (IASC) was formed after the Tenth Congress (1972) of the International Congress of Accountants was held in Sydney. The objectives of the IASC are to establish international accounting standards and to ensure that published financial statements comply with these standards. There are more than forty members of the IASC, including the United States, the United Kingdom, and Australia.

Solomon Islands or elsewhere among the developing island entities of the South Pacific — has been made to formulate and implement accounting standards which specifically recognize local conditions, influences, and problems. In a broader but related context, the irrelevance and inappropriateness of imported accounting standards to the needs of developing countries were highlighted at the Ninth Conference of the Confederation of Asian and Pacific Accountants (CAPA)[4]:

> . . . two-thirds of the world today is comprised of developing countries whose circumstances should be considered in the formulation of international accounting and auditing statements. Certain standards or principles that may seem logical and appropriate from the viewpoint of a western developed country may be inappropriate or may work undue hardships . . . in a developing country.[5]

The point may be illustrated by reference to accounting for devaluation. Accounting standards in developed countries usually require exchange losses to be charged to operations as a diminution of net worth. However, such a practice in the case of a developing country, which finances imported plant and equipment by a foreign currency loan or credit, could result in accounting anomalies. Should a developing country devalue its currency, the cost of such fixed assets is usually increased by the amount of additional local currency required to meet the foreign liability incurred for their purchase. If it were mandatory to charge exchange losses to operations, not only would subsequent financial statements be unrealistic, but the companies involved could be technically insolvent.[6]

## PUBLIC-SECTOR ACCOUNTING

Public-sector accounting in the Solomon Islands since national independence reflects the British influence of its former protectorate status. This influence is seen initially in the continuation of the Westminster model with its emphasis on the financial accountability of the executive to the legislature and, ultimately, to the electorate.

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[4] The membership of CAPA extends north to Korea and Japan, south to Australia and New Zealand, west to Pakistan and Lebanon, and east to the United States. The objective of this body is to develop a coordinated regional accounting profession with harmonized standards.

[5] Washington SyCip, "The Role of CAPA in Achieving Harmonization," *Accountants' Journal* (Philippine Institute of Certified Public Accountants), no. 3 and no. 4 (1979), 19.

[6] Ibid.

On national independence, the constitution specifically defined the roles of these parliamentary institutions involved in the financial management control of the public sector. Under the constitution, the National Parliament is empowered to authorize and control the raising and expenditure of finance. Constitutional provision is also made for the establishment of the Auditor General's Office and Public Accounts Committee.

The lynchpin of the public-sector accounting system is the Ministry of Finance, which administers the Public Finance and Audit Act of 1978, prepares and monitors the annual budget, advises on and coordinates national financial and economic policies, and maintains the government accounting records. It also provides advice to the Minister for Finance on policy matters relating to the various statutory bodies for which he is responsible, namely, Government Shareholding Agency, Solomon Islands Monetary Authority, Development Bank of Solomon Islands, and National Provident Fund. Overall control of economic policy, however, is vested in the Central Planning Office.

Although the public-sector accounting system and its cognate institutions have been designed to foster financial accountability, in practice the attainment of this objective is restricted by the acute shortage of professionally qualified accountants in the Solomon Islands — as elsewhere among the developing microstates of the South Pacific. The public-sector accounting function in the Solomon Islands inherited, from the country's former protectorate status, traditional negative British public-sector attitudes toward the employment of properly qualified professional staff in accounting positions. Historically, there has been no general insistence on formal accounting qualifications — even at executive levels — in the British Civil Service and, of more significance in the present context, the former Colonial Service. It was commonly believed that professional accountants as such were needed neither in Whitehall nor the far-flung outposts of the empire. The conventional wisdom — or lack of it — held that persons occupying accounting positions needed only to assimilate the rules and regulations of government accounting procedures and be familiar with the fund-cash system.

Where more general accounting training was considered desirable for particular positions in the public sector, short accounting courses of topical appeal but limited scope and depth were usually devised by specialist in-service training groups. The historical prejudice against properly qualified professional accountants, in

conjuction with the fostering of the cult of in-service training, resulted in many government accounting positions being filled on a seniority basis by administrators, clerks, and other non-accountants. To a large extent, the government accounting and budgeting function was vested in a small cadre of university graduates from diverse non-accounting disciplines, supplemented by a very large unqualified support staff reaching up into surprisingly high levels of financial management and control. In this context, it has been observed:

> The low status given to government accounting in the United Kingdom has been transmitted to other countries in the British sphere of influence and has further encouraged the dominance of private-sector auditing, making it more difficult for the government sector to control the structure and the duties of the accounting profession.[7]

## PROVINCIAL GOVERNMENT ACCOUNTING

In addition to the national government and its various ministries located centrally in the capital of Honiara, provincial governments have been established for the seven provinces (Western, Isobel, Central, Guadacanal, Malaita, Makira, and Temotu) of the Solomon Islands. Under the provisions of the Provincial Government Act of 1981, each province has a legislature in the form of an elected provincial assembly, complete with speaker, clerk, standing orders, and ordinances. Committees of assembly members are responsible for the various provincial functions including health, education, agricultural extension services, construction of roads and bridges, and preservation of local culture. These functions are financed by local rates and grants from the national government.

Each province also has a provincial executive headed by a premier elected by the provincial assembly. The members of the provincial executive other than the premier are appointed by the Minister for Home Affairs on the advice of the premier. The Ministry of Home Affairs exercises a general supervisory role over the affairs of the provincial governments. Provincial government staff includes assigned members of the National Public Service, but mainly those who have requested assignment to their home provinces.

Responsibility for provincial accounting is vested in the provincial treasurer. In theory, the treasurer, as the relevant divisional head, should also be responsible for financial management and control. In practice, however, provincial administrators and other divisional

[7] Richard J. Briston, "The Evolution of Accounting in Developing Countries," *International Journal of Accounting* (Fall 1978), 115.

heads tend to assume this function and relegate the role of treasurer to that of bookkeeper. Organizationally, the treasurer is accorded very low status in the provincial hierarchy, often being junior to most other divisional heads and to the provincial clerk and his deputy. Consequently, the financial advice of the treasurer is seldom sought and often ignored. The problem is exacerbated by the fact that provincial administrators and divisional heads are often unaware of the underlying principles of financial management and control.

In this type of financial and accounting environment, it is not surprising that financial accountability of the provincial executive is not always achieved. The national government has been concerned in recent years by the not uncommon insolvency of provinces and their increasing resort to substantial loans (relative to recurrent revenues) to meet outstanding debts. Under the Public Finance and Audit Act of 1978, the national government provides loan funds to provincial assemblies for the (1) provision of social and economic services; (2) construction or execution of development projects; and (3) purchase of land, ships, vehicles, and equipment.

It is conjectural, however, to what extent loan funds from the national government are used for these designated purposes. For the year ended December 31, 1980, the auditor general reported that 80 percent ($530,000) of the loan funds up to that date had been made to enable provinces to meet their debts — mainly to the national government. The scheduled repayments were anticipated to absorb most of internally generated revenue, necessitating large-scale rescheduling and eventual write-off in some cases.[8]

In the South Pacific, problems of accounting control and financial management at the provincial government level are not confined to the Solomon Islands. These problems may be more accentuated in other areas. For example, it would appear that in neighboring Papua New Guinea, the financial excesses of the free-spending provinces have resulted in the evolution of a peculiarly Melanesian style of porkbarreling. There, the first priority of provincial parliamentarians, in return for the electoral support of their constituents, tends to be the maximization of the number and value of development projects and improvements for their own provinces. Although this stage has not yet been reached in the

[8] Solomon Islands, *Certificate and Report of the Auditor General on the Accounts of the Solomon Islands Government for the Year Ended 31st December 1980* (Honiara: National Parliament Paper No. 42 of 1981), 22.

Solomon Islands, a distinct possibility exists that accounting control and financial management in provincial government could emerge as greater problems than those in national government.

## ACCOUNTING EDUCATION AND TRAINING

No S.I. national has ever become a qualified accountant in the sense of being a member of a recognized professional body and eligible for statutory registration as a practicing accountant. Thus, none is a member of the metropolitan accounting bodies well represented by expatriate staff — notably, the Institute of Chartered Accountants in England and Wales, The Institute of Chartered Accountants in Australia, Australian Society of Accountants, and New Zealand Society of Accountants.

The reasons for this non-participation in accounting at the professional level by S.I. nationals are largely historical and cultural. In the BSIP era, neither encouragement nor opportunity for this type of vocational development existed. Since national independence, a growing recognition of the need for professional accounting qualifications (particularly in the reports of the auditor general) has existed, but progress so far has been confined to the education and training of nationals at the accounting technician or support level, with vocational standards at best not higher than those required in, for example, the accounting and commerce certificates of the New South Wales Department of Technical and Further Education in Australia.

In this regard, some S.I. nationals have been admitted to membership of the Association of Accounting Technicians, which is a second tier body for accountants in Britain, as a result of external studies and in-house tuition. The education and training of nationals at the accounting technician level are also conducted locally at the Honiara Technical Institute and at the Honiara Extension Centre of the University of the South Pacific.

The Honiara Technical Institute conducts the (British) Business Education Council National Certificate Course organized on a full-time basis of eight terms (eighty weeks) extending over two years.[9]

The Honiara Extension Centre provides a local tutor and a weekly satellite session with the course tutor in Suva for the Certificate in Accounting Studies. The certificate program consists

[9] Honiara Technical Institute, *Handbook 1982-1983* (Honiara: Government Printing Works, 1982), 17-18.

of two one-semester 100-level degree courses and three one-semester 100-level vocational courses.[10]

A few S.I. nationals have studied accounting abroad at much the same level as in Honiara at the Papua New Guinea University of Technology in Lae and the Fiji Institute of Technology in Suva. Some have attended various ad hoc accounting courses in Britain, Australia, New Zealand, and Fiji. Further, individual companies and accounting firms in the private sector of the Solomon Islands provide their own training facilities for clerks and other support staff, including occasional metropolitan work-experience programs in Britain, Australia, and New Zealand.

The importance of accounting education and training has not always been recognized by visiting missions involved directly or indirectly in the allocation of overseas aid. For example, the Education and Training Mission to the South Pacific, which reviewed the regional educational and training function of the Australian Development Assistance Bureau in 1981, noted a general need for administrative and managerial training — particularly in the areas of budgeting, financial control, management communication, and policy analysis and formulation. However, the specific need for accounting education and training at both professional and support levels was not identified.[11]

One of the problems of this type of survey, which inevitably militates against accurate and comprehensive assessment, is that the resources involved are usually spread too thinly and selectively. Thus, there has been a tendency for visiting missions to (1) arrange their itineraries in the same way as package tour operators, consequently allowing only an inadequate two or three days in each location; and (2) interview only government officials and ignore the expertise of the private sector, thus gaining only a blinkered view of national requirements.

## INSTITUTE OF SOLOMON ISLANDS ACCOUNTANTS

A recent development in accounting education and training was the establishment of the Institute of Solomon Islands Accountants (ISIA) in August 1982, after an unsuccessful attempt some years

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[10] C. Gibson and M. White, *Accounting Studies in the South Pacific: An Introductory Handbook* (Suva: Extension Services, The University of the South Pacific, 1983), 10-11; also, K. T. Livingston, John Sommerhauser, and Somaiya Naidu, eds., *Extension Studies Handbook 1983* (Suva: Extension Services, The University of the South Pacific, 1982), 104-5.

[11] Australian Development Assistance Bureau, *Report of the Education and Training Mission to the South Pacific*, Country Paper No. 3 — Solomon Islands (Canberra: Printwrite, 1981), 133-44.

ago to found such a local vocational entity. The foundation members of the ISIA were for the most part British accountants employed by the S.I. government who were concerned with providing a course of accounting studies for the indigenous population as an integral part of employment localization policy.

The qualifying examinations of the ISIA commenced in November December 1983. The examination syllabus covers, at a fairly basic level, a limited number of subjects including numeracy, data processing, financial accounting, company accounting, financial management, public-sector accounting, management accounting, auditing, administration, law, and taxation.

This type of examination syllabus is suitable for accountants seeking to qualify at the support or technician level. It is subprofessional in the sense that successful candidates would not be exempted from the educational requirements of generally accepted and officially recognized professional bodies, such as the Australian Society of Accountants and The Institute of Chartered Accountants in Australia. Although it is too early for an evaluation of the extent to which ISIA has achieved its objectives, at best it can only hope to provide — by means of regular examinations — a supply of sub-professional accounting staff to complete routine bookkeeping tasks at the support or technician level. Such staff would not be qualified, however, to make decisions at the professional level regarding important matters including accounting policy, systems design, financial management, and budgetary control. These types of decisions, presumably, would continue to be made by professionally qualified expatriate accountants in both private and public sectors.

## CONCLUSIONS AND RECOMMENDATIONS

The accounting development of the Solomon Islands since national independence has been characterized by a sedulous adherence to outmoded doctrines and ineffectual palliatives. The standards and composition of the local accounting profession have continued to reflect the influence of the colonial past with its exclusive emphasis on expatriate skills and procedures. No attempt has been made to formulate accounting standards which recognize the special needs of a developing microstate seeking economic stability and prosperity. In view of the imported and disuniform nature of the standards currently observed by expatriate accountants, coupled with the local profession's dependence on self-regulation, consideration should be given to the establishment of an indigenous

statutory body to determine and enforce accounting standards which recognize the specific developmental needs and priorities of a South Pacific island rather than the requirements of longer-established neighboring metropolitan powers.

The accounting education and training of nationals, too, have not kept pace with contemporary needs. The private and public sectors of the Solomon Islands are characterized by a shortage of accountants, which is evident at both professional and support levels. Although the supply of accountants at the support or technician level can be expected to increase through local and overseas vocational courses, no long-term planning has been devised for accounting education and training at the professional level. In the absence of appropriate strategies for professional formation in accounting, the profession in the Solomon Islands will continue to be dominated by expatriate accountants.

Apart from the adverse implications of this dependence on imported knowledge and skills for the employment localization policies of the S.I. government, the public sector needs the financial guidance and control of properly qualified accountants at key points of the economy. Managing a modern state, even a Pacific mini-state, is big business. The annual budget of the Solomon Islands for 1985 was $(SI)91.4 million, with Australia contributing $(A)5.3 million in aid funds.[12]

The need for properly qualified accountants is particularly evident in joint equity undertakings between government and private enterprise, such as in the palm oil and fishing industries. In this situation, it is necessary for government accountants to have the same professional experience and commercial skills as their private-sector counterparts to ensure that joint venture profits are not siphoned off to metropolitan parent companies through "creative" expense distribution, transfer pricing, false documentation, or other ruses.

For participatory foreign investment to be of benefit to the host country, accounting for the subject ventures must be both accurate and equitable. In the absence of appropriate planning to ensure an adequate supply of qualified accountants to safeguard the financial interests of the public sector, the possibility that foreign investment in local undertakings may be manipulated to the financial detriment of the host country exists. The accountants for

[12] For comparative purposes, the S.I. dollar since independence (1978) has been generally on a par with the Australian dollar, but, with the latter's recent fall, the rate is now $(SI)1=$(A)1.09.

such firms, in common with accountants elsewhere, have the capacity to make the bottom-of-the-line figure anything they like, depending on the instructions of management and the nature of the assumptions adopted. In the particular context of joint equity undertakings, an urgent need exists for expanded programs of accounting education and training to ensure the constant availability of professional expertise and advice to the public sector of the Solomon Islands. In the wider context of financial accountability of the executive to the legislature and the electorate, accounting education and training at the professional level become national imperatives.

## BIBLIOGRAPHY


Allan, C. H. *Recent Developments in the Solomon Islands.* Development Studies Centre Seminar Paper. Canberra, Australia: Australian National University, July 1978.

Australian Development Assistance Bureau. *Report of the Education and Training Mission to the South Pacific.* Country Paper No. 3 — Solomon Islands. Canberra, Australia: Printwrite, 1981.

Hardman, D. J. "Accounting for the South Pacific." *Chartered Accountant in Australia* (August 1982), 16-18.

______. "Third World Accounting Perspectives: Solomon Islands." *Communique* [Journal of the New South Wales Institute of Technology] (June 1983), 3-6.

Herlihy, J. M. *Decolonization Policies in Solomon Islands: The Model that Never Was.* Research School of Pacific Studies Seminar Paper. Canberra, Australia: Australian National University, November 1979.

Juchau, Roger. "Accounting Education in the Developing Island Nations of the South Pacific" in *Accounting Education in Economic Development Management,* ed. Adolf J. H. Enthoven. Amsterdam: North-Holland, 1981.

Solomon Islands National Parliament. *Report of Public Account Committee on the Government Accounts for 1980.* Parliamentary Paper No. 41. Honiara, 1981.

# *Translated Financial Statements Can Be Meaningful*

THOMAS W. HALL and H. JIM SNAVELY*

At the present time, application of commonly used translation methodologies results in financial statements which are of limited usefulness. Translation gains or losses do not represent real gains or losses except by coincidence; balance sheet translation adjustments are no more than numbers needed to make the translated balance sheets balance; and real and nominal income effects are mixed, precluding a rational interpretation of income. This situation need not exist. The translation of foreign currency financial statements can and should produce meaningful results.

This paper will (1) explain why current translation methodologies produce numbers which are of limited usefulness, (2) develop, through a series of basic examples, a method which produces meaningful numbers, and (3) present a comprehensive example comparing the results of the different methods. Even if translated financial statements cannot be corrected, investors, creditors, and managers of firms with foreign operations need to understand the method described in the following pages because its application produces numbers which are useful in evaluating the results of foreign operations and planning hedging activities.

## THE DEFICIENCY IN CURRENT TRANSLATION METHODOLOGIES

Available evidence indicates that domestic and foreign inflation rates play a major, though not complete, role in determining

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exchange rate changes. Studies by Aliber and Stickney[1] and Giddy[2] confirm a significant relationship between inflation and changes in exchange rates. A recent study by Hall[3] suggests that during periods of high inflation and floating exchange rates, relative inflation rates may account for as much as 82 percent of the variations in exchange rates.

This relationship between inflation and exchange rate changes is described by the purchasing power parity (PPP) theory. The PPP theory predicts that a change in the country-to-country ratio of commodity price levels results in a proportional change in the exchange rate.[4] Mathematically, the relationship can be expressed as follows:

$$E_t = E_{t-1}\left[\frac{P_{d,t} \div P_{d,t-1}}{P_{f,t} \div P_{f,t-1}}\right],$$

where

$E_t$; $E_{t-1}$ = exchange rates at times t and t−1 denominated in domestic currency units per foreign currency unit,

$P_{d,t}$; $P_{d,t-1}$ = domestic price levels at times t and t−1, and

$P_{f,t}$; $P_{f,t-1}$ = foreign price levels at times t and t−1.

In spite of the significant relationship between changes in exchange rates and inflation rates, present translation methodologies ostensibly ignore inflation in translating foreign currency financial statements. However, the exchange rates are an integral part of statement translation procedures. Thus, while inflation is explicitly ignored, it implicitly affects the statements.

Since the effects of foreign and domestic inflation are not

[1] R. Z. Aliber and C.P. Stickney, "Accounting Measures of Foreign Exchange Exposure: The Long and Short of It," *Accounting Review* (January 1975), 44-57.

[2] I. H. Giddy, "Exchange Risk: Whose View?" *Financial Management* (Summer 1977), 23-33.

[3] Thomas W. Hall, "Inflation and Rates of Exchange: Support for SFAS No. 52," *Journal of Accounting, Auditing & Finance* (Summer 1983), 299-313.

[4] Significant evidence suggests that not all exchange rate changes can be attributed to the change in purchasing power of the moneys involved. Interest rates, political risks, and restrictions on the flow of money are examples of other factors affecting exchange rates. Published works by M. R. Darby, "Does Purchasing Power Parity Work?" *National Bureau of Economic Research Working Paper No. 607* (December 1980) and J.A. Frenkel, "The Collapse of Purchasing Power Parities during the 1970s," *European Economic Review* (1981), 145-65, explore deviations from the purchasing power parity theory.

considered, reported translation gains and losses are not meaningful — they are the uninterpretable result of various economic events and accountants' calculation rules. Failure to consider the effects of foreign inflation also precludes the identification of purchasing power gains/losses from holding a foreign net monetary position. Finally, failure to consider domestic inflation makes it impossible to distinguish between real and nominal amounts. In sum, current translation methodologies produce results of limited usefulness because they ignore the effects of changes in domestic and/or foreign price levels.

To produce meaningful results, therefore, a translation method must consider the effects of both domestic and foreign inflation. The next section presents a series of examples which illustrate how information regarding foreign and domestic inflation rates can be used to prepare meaningful translated foreign currency financial statements.

## SOME BASIC EXAMPLES

The following basic examples highlight some differences between meaningful numbers that should be reported and what is reported under translation methodologies which are currently in widespread use. We use results of applying the current rate (CR) and the temporal rate (TR) methods[5] as benchmarks. The discussion begins with cases in which the foreign operation holds only monetary assets and concludes with an example in which nonmonetary assets are held. Included are cases where only the foreign price level changes, where only the domestic price level changes, and where both foreign and domestic price levels change.

### Holding Monetary Assets with a Changing Foreign Price Level

Assume that a parent corporation established a foreign subsidiary by investing 2,000 domestic currency units (DC) when the exchange rate was 2 DC for 1 foreign currency unit (FC). The subsidiary held the FC for a year, and at year end, the exchange rate was 1.667 DC for 1 FC. The foreign country incurred 20 percent inflation, while the domestic price level remained unchanged. At the end of the year, the subsidiary's 1,000 FC were exchanged for 1,667 DC for a loss of 333 DC.

What type of loss did the firm sustain? Because the firm held

[5] Information reported in Frederick D. S. Choi and Gerhard G. Mueller, *International Accounting* (Englewood Cliffs, N.J.: Prentice-Hall, 1984), 157-61, indicates that the current rate method and temporal method represent the most widely used translation methodologies.

monetary assets, FC units, in a period when the purchasing power of those FC units was decreasing, the firm sustained a purchasing power loss calculated as follows:

| | | |
|---|---|---|
| Monetary assets in FC units | 1,000 | FC |
| Foreign inflation rate | × .20 | |
| Purchasing power loss in FC | 200 | FC |
| Ending exchange rate (DC/FC) | × 1.667 | |
| Purchasing power loss in DC | 333 | DC |

Both the CR and TR translation methods would report this 333 DC loss, but the loss would be incorrectly identified as an exchange loss rather than as a purchasing power loss.

To change the example slightly, assume that the year-end exchange rate was 1.50 DC for 1 FC unit. The 1,000 FC units were exchanged for 1,500 DC units. Here, the firm sustained a loss of 500 DC (2,000 DC − 1,500 DC). A portion of the 500 DC loss relates to exchange rate exposure, and part relates to the holding of monetary assets during inflation. The 500 DC total loss should be reported in two components: a 300 DC purchasing power loss and a 200 DC exchange rate loss.

The loss in purchasing power is calculated as in the first example.

| | | |
|---|---|---|
| Monetary assets in FC units | 1,000 | FC |
| Foreign inflation rate | × .20 | |
| Purchasing power loss in FC | 200 | FC |
| Ending exchange rate (DC/FC) | × 1.50 | |
| Purchasing power loss in DC | 300 | DC |

In this instance, however, the actual exchange rate at year end was 1.50 DC for 1 FC.

In the calculation of the exchange rate loss, an exchange rate of 1.667 DC to 1 was used. This exchange rate is an "expected" rate; it is the rate of exchange that would have existed had the rate changed exactly in proportion to the change in purchasing power of the moneys involved. This expected exchange rate is calculated using the purchasing power parity formula given earlier:

$$2 \text{ DC/FC} \times \frac{1.0}{1.2} = 1.667 \text{ DC/FC}$$

The exchange rate loss is calculated as the product of the firm's

net asset position in price-level–adjusted FC units and the difference in the actual exchange rate at year end as compared to the expected rate due to inflation.

| | | |
|---|---|---|
| Net asset position in nominal FC units | 1,000 | FC |
| Foreign inflation adjustment | × 1.2 | |
| Price-level–adjusted net assets in FC units | 1,200 | FC |
| Real change in exchange rate (difference between actual and expected ending exchange rate) | × (1.5 − 1.667) | |
| Exchange rate loss | 200 | DC |

In this instance, the CR and TR translation methods would report the 500 DC as an exchange loss. No distinction would be made between that portion of the loss due to exchange risk and that portion due to the changing foreign price level.

These examples illustrate an approach to reporting exchange rate gains/losses which considers the effect of foreign inflation. This approach segregates the currently reported translation gain/loss into two components: (1) the purchasing power gain/loss incurred from holding a FC net monetary position during a period of changing FC prices and (2) an exchange rate gain/loss. This exchange rate gain/loss reflects the effect of a real change in value of one currency relative to another.

#### Holding Monetary Assets with a Changing Domestic Price Level

In the previous examples, there were no real differences between real and nominal amounts because it was assumed that the domestic price level remained unchanged. To explore the potential differences between real and nominal amounts, the facts are changed. Assume the same initial investment, but reverse the inflation rate assumptions. Now the domestic country is assumed to experience a 20 percent inflation rate, while the foreign country price level remains unchanged. Further, assume that the year-end exchange rate was 2.40 DC to 1 FC unit (which is a rate change exactly in proportion to the relative inflation rates). In this example, the 1,000 FC at year end can be exchanged for 2,400 DC. The firm has incurred what might appear to be a gain of 400 DC (2,400 DC − 2,000 DC), and present translation methods would report this gain. Actually, this gain is only a nominal gain since DC units decreased in purchasing power by 20 percent. In real terms, the firm has not incurred a gain but has only maintained the purchasing

power of its original investment. In addition, the firm has not incurred a purchasing power gain or loss since the monetary FC units held were not subject to inflation in the foreign country.

Changing the example slightly, assume that at year end the exchange rate was 2.30 DC to 1 FC. The 1,000 FC units at year end could be exchanged for 2,300 DC. In real terms, the firm has sustained a loss of 100 DC calculated as follows:

| | |
|---|---|
| Initial DC investment | 2,000 DC |
| Domestic inflation adjustment | × 1.2 |
| Constant dollar investment | 2,400 DC |
| Year end worth of 1,000 FCs | − 2,300 DC |
| Loss | 100 DC |

The loss is an exchange rate loss and can be calculated as the product of the firm's net asset position in FC units and the difference in the actual ending exchange rate as compared to the rate that would have existed had the exchange rate changed exactly in proportion to the relative inflation rates.

| | |
|---|---|
| Beginning exchange rate (DC/FC) | 2 |
| Inflation effect | × 1.2/1 |
| Expected ending exchange rate based on relative inflation rates (DC/FC) | 2.40 |
| Actual ending exchange rate (DC/FC) | 2.30 |
| Difference (DC/FC) | .10 |
| FC net asset position | × 1,000 FC |
| Exchange rate loss | 100 DC |

No gain or loss in purchasing power took place since there was no inflation in the foreign country.

Application of the CR or TR translation methods, however, would require the firm to report a 300 DC gain. This gain has two components: (1) a 400 DC nominal gain due to a decrease in the purchasing power of DC units as compared to FCs and (2) a 100 DC real loss resulting from an exchange rate change which was not proportional to the changes in the purchasing power of the two moneys. Thus, present inflation methods result in not disclosing a real exchange loss of 100 DC and, instead, in reporting a nominal gain of 300 DC when, in fact, the firm is worse off at year end than at the beginning.

**Holding Monetary Assets When Both Domestic and Foreign Price Levels Change**

To illustrate another point, assume that both the domestic and foreign country incur 20 percent inflation. The exchange rate would not change unless other factors cause a change. If the exchange rate remained 2 DC for 1 FC, in real terms the firm would incur a 400 DC purchasing power loss calculated as 1,000 FC units × 20 percent inflation × 2 DC. Present translation methods, however, would report no gain or loss since the beginning and ending exchange rates remained unchanged.

If the ending exchange rate was 1.90 DC to 1 FC, in real terms the firm incurred a purchasing power loss of 380 DC and an exchange loss of 120 DC calculated as follows:

Purchasing Power Loss

| | | |
|---|---|---|
| Monetary assets in FC units | 1,000 | FC |
| Foreign inflation rate | × .20 | |
| Purchasing power loss in FC | 200 | FC |
| Ending exchange rate (DC/FC) | × 1.90 | |
| Purchasing power loss in dollars | 380 | DC |

Exchange Loss

| | | |
|---|---|---|
| Beginning exchange rate (DC/FC) | 2.00 | |
| Inflation effect | ×1.2/1.2 | |
| Expected ending exchange rate based on relative inflation rates (DC/FC) | 2.00 | |
| Actual ending exchange rate (DC/FC) | 1.90 | |
| Difference (DC/FC) | .10 | |
| FC net asset position adjusted for foreign inflation (1,000 × 1.2) | × 1,200 | FC |
| Exchange rate loss | 120 | DC |

Using the CR and TR translation methods, the firm would report only a 100 DC exchange loss.

**Holding Nonmonetary Assets**

Had the parent used the 2,000 DC units to purchase land in the foreign nation instead of holding FC units of money, how would the previous examples change? First, no purchasing power gains or losses would have occurred since land is a nonmonetary item. Purchasing power gains/losses result only when monetary assets/liabilities are held. Instead of being exposed to possible purchasing

power gains/losses, the firm would be exposed to possible gains/losses from changes in the market value of the land. Second, the exchange rate losses would have been exactly the same as the previous examples. The type of asset held does not affect the exchange rate gain or loss. An exchange rate gain or loss results when the exchange rate does not change in proportion to the inflation rates of the countries involved, and the foreign operation has a non-zero net asset position (assets do not equal liabilities).

Application of the TR method when holding nonmonetary assets would, appropriately, not report any purchasing power gain or loss. The TR method would fail to report exchange gains or losses, however, because nonmonetary assets would be translated at historical exchange rates.

A strict application of the CR method to land or other fixed assets results in neither a purchasing power gain or loss, nor an exchange rate gain, nor any balance sheet translation adjustment since present and all previous balance sheet amounts and income statement related amounts are translated at the current rate. Thus, all amounts maintain the same relationship to the other statement amounts as reported in the FC statements. Modification of the CR method so that prior balance sheet figures are translated at the exchange rate in existence at those prior balance sheet dates (rather than the exchange rates at the current balance sheet date) and/or income statement related numbers are translated at rates other than the rates as of the end of the latest balance sheet (e.g., average rates for the year reported) results in either translation gain/loss amounts on the income statement or translation adjustment figures on the balance sheet (which sometimes are reported as adjustments to various named reserves). These amounts would not be the same exchange gain/loss amount as calculated in the previous examples because the CR method fails to consider the effects of foreign and domestic inflation.

#### Summary of Examples

The previous examples indicate that a firm experiences real purchasing power gains/losses whenever monetary liabilities or assets denominated in FC units are held, while at the same time, the FC unit is subject to inflation/deflation. Also, the firm experiences real exchange gains/losses whenever exchange rate movements are only partially accounted for by foreign and domestic relative inflation rates. On the other hand, nominal gain/losses may exist when there are no real gains/losses and, conversely, nominal gains/losses may not exist even though real gains/losses are incurred.

In addition. sometimes nominal gains/losses correspond with real gains/losses.

Since the gains/losses which present translation methods require to be reported are nominal gains/losses, since the required methods do not distinguish between exchange gains/losses and purchasing power gains/losses, and since the nominal figures have no reliable relationship to the real amounts, the results of applying current translation methods appear to be of little value and potentially misleading.

## A COMPREHENSIVE EXAMPLE

In this section, we use a comprehensive example to illustrate more fully a new approach to translation foreign currency financial statements. This new approach identifies both purchasing power gains/losses and exchange gains/losses resulting from foreign investments. All amounts are stated in real terms. For identification purposes, the new method shall be referred to as the restate-translate-rollforward (RTR) method.[6]

For comparison purposes, results for the comprehensive example will also be calculated using a variation of the temporal method (explained in SFAS No. 8[7]) and a variation of the current rate method (explained in SFAS No. 52[8]). Brief summaries of each method follow.[9]

The RTR method would (1) comprehensively restate FC statements for any inflation/deflation in the foreign currency, (2) translate year-end assets and liabilities using the actual exchange rate at the year end, (3) translate the capital stock by using the number of DC units invested adjusted only for domestic inflation, (4) translate the revenue, expenses, gains, and losses for the year at the actual year-end exchange rate, (5) determine the exchange rate gain or loss by multiplying the beginning net assets of the

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[6] The RTR method should not be confused with the restate-translate method. The restate-translate method does not identify exchange gains/losses, nor does it report results of operations in real terms. For a more comprehensive review of the restate-translate approach, see Paul Rosenfield, "General Price-Level Accounting and Foreign Operations," *Journal of Accountancy* (February 1971), 58-65.

[7] Financial Accounting Standards Board, *Statement of Financial Accounting Standards No. 8*, "Accounting for the Translation of Foreign Currency Transactions and Foreign Currency Financial Statements" (Stamford, Conn.: FASB, 1975).

[8] Financial Accounting Standards Board, *Statement of Financial Accounting Standards No. 52*, "Foreign Currency Translation" (Stamford, Conn.: FASB, 1981).

[9] Jon R. Nance and Roger A. Roemmich, "Foreign Currency Translation: An Evaluation," *International Journal of Accounting* (Spring 1983), 29-48, provide an interesting review of five translation methods including the approach set forth by SFAS No. 52.

price-level–adjusted foreign currency balance sheet times the difference between the actual ending exchange rate and what the ending rate would have been had it changed exactly in accord with the inflation rates in the two countries,[10] and (6) rollforward prior period statements which had been translated into DC units by the procedures described above using only information regarding domestic inflation for the rollforward period.

SFAS No. 8 methodology required that (1) monetary balance sheet items be translated at the exchange rate as of the balance sheet date (current rate), (2) nonmonetary balance sheet assets and liabilities be translated at the relevant historical translation rate (rate which existed at the transaction date), (3) income statement items which relate to nonmonetary assets/liabilities (e.g., depreciation) are translated at the historical rate, (4) the remaining income statement items are translated at a rate which existed when the transactions occurred (average calculations are encouraged), and (5) the amount needed to make the balance sheet balance is reported on the income statement as a translation gain or loss.

SFAS No. 52 requires (1) translation of all assets and liabilities at the rate which existed at the balance sheet date (current rate), (2) translation of income statement items at rates which existed at the transaction dates (averages are encouraged), and (3) the amount needed to make the balance sheet balance is reported as a separate component (translation adjustment) of stockholders' equity.[11] This translation adjustment will be used later in the calculation of a gain/loss upon sale, substantially complete liquidation, or partial sale of the investment in the foreign entity. (However, if the firm's foreign operations are in a highly inflationary economy, e.g., one incurring a three-year cumulative inflation of over 100 percent, SFAS No. 52 requires application of the SFAS No. 8 method.)

#### Assumptions for the Comprehensive Example

Assume a U.S. company initially invested $2,000 in a foreign subsidiary at the beginning of year 1. The subsidiary purchased a building with a three-year life for 1,000 FC and used straight-line depreciation with no salvage value. The building was leased to a client for 450 FC a year, and the lease stipulated that at the beginning of each new year, the lease payment was to be adjusted

[10] Additional investments or disinvestments would require a similar treatment.

[11] SFAS No. 52 is not clear as to whether capital stock (and paid-in capital) accounts should be translated at current or historical rates. Our example uses the historical rate. If current rates are required, both the capital accounts and the translation adjustment would change by the same amount.

for the prior year's foreign country inflation. Due to a 20 percent annual inflation, actual FC cash flows were as follows:

| | | |
|---|---|---|
| Year 1 | | 450 FC |
| Year 2 | 1.2 × 450 FC = | 540 FC |
| Year 3 | 1.2 × 540 FC = | 648 FC |

Lease payments were received uniformly throughout the year. At the end of year 3, the building was abandoned, the related accounts eliminated, and the subsidiary was liquidated.

Comparative statements in nominal FC units based on the foregoing assumptions are presented in Exhibit 1. These statements indicate that the subsidiary earned a cumulative three-year profit of 638 nominal FC.

Also, assume that over the three-year period, the foreign country incurred inflation of 9.545 percent each six-month period (20 percent per year) while the United States incurred inflation of 4.881 percent each six-month period (10 percent per year). After adjusting for differences in relative inflation rates, it is assumed the foreign currency lost 5 percent of its value relative to the U.S. dollar each year. Relevant general price indices and exchange rates were as follows:

| | US price index | FC price index | Actual exchange rate | Expected exchange rate based on beginning of year exchange rate and current year relative inflation rates[12] |
|---|---|---|---|---|
| Beg yr 1 | 100 | 100 | \$2–1 FC | |
| Mid yr 1 | 104.881 | 109.545 | 1.871–1 | |
| End yr 1 | 110 | 120 | 1.742–1 | 1.833 –1 |
| Mid yr 2 | 115.369 | 131.453 | 1.630–1 | |
| End yr 2 | 121 | 144 | 1.517–1 | 1.597 –1 |
| Mid yr 3 | 126.906 | 157.744 | 1.419–1 | |
| End yr 3 | 133.1 | 172.8 | 1.321–1 | 1.390 –1 |

Exhibit 2 presents comparative price-level–adjusted FC state-

[12] The expected exchange rates were calculated as follows:

$$\text{Year 1:} \quad 2 \times \frac{110/100}{120/100} = 1.833$$

$$\text{Year 2:} \quad 1.742 \times \frac{121/110}{144/120} = 1.597$$

$$\text{Year 3:} \quad 1.517 \times \frac{133.1/121}{172.8/144} = 1.390$$

**Exhibit 1. Comparative Statements in Nominal FC Units**

| Balance sheets (FC) | Beg yr 1 | End yr 1 | End yr 2 | End yr 3 |
|---|---|---|---|---|
| Cash | 0 FC | 450 FC | 990 FC | 1,638 FC |
| Building | 1,000 | 1,000 | 1,000 | 0 |
| Accumulated depreciation | 0 | (333) | (666) | 0 |
| Total assets | 1,000 | 1,117 | 1,324 | 1,638 |
| Initial equity | 1,000 | 1,000 | 1,000 | 1,000 |
| Retained earnings | 0 | 117 | 324 | 638 |
| Total equity | 1,000 FC | 1,117 FC | 1,324 FC | 1,638 FC |
| Income statements (FC) | | | | |
| Revenues | | 450 FC | 540 FC | 648 FC |
| Depreciation expense | | (333) | (333) | (334) |
| Operating income | | 117 | 207 | 314 |
| | | 117 FC | 207 FC | 314 FC |

ments prior to rollforward to end of year 3 FCs. Information regarding yearly beginning price-level–adjusted equity, presented in this exhibit, is used in later sections in the determination of the yearly exchange gain/loss under the RTR method.

**Results**

Income statement results of applying the RTR, SFAS No. 8, and SFAS No. 52 methodologies are presented in Exhibit 3. Translated balance sheet amounts are presented in Exhibit 4. A comparison of the results yields several interesting and very significant differences.

In reporting results of operations, both SFAS No. 8 and SFAS No. 52 methodologies report the same nominal revenue amounts, and these amounts show an upward trend. This upward trend is present because the example assumed rental payments were adjusted for inflation. The RTR method reports real amounts and a slowly declining trend. This slowly declining trend more accurately reflects economic reality because, although the rental payments were adjusted for inflation, suggesting a stable trend, in real terms the foreign currency lost value relative to the U.S. dollar, thus resulting in a declining trend. Had the exchange rate changed in exact proportion to the relative inflation rates, the RTR method would have reported constant revenues.

**Exhibit 2. Comparative Price-Level–Adjusted FC Statements (Prior to rollforward to end of year 3)**

| Balance sheets (FC) | Year | | | |
|---|---|---|---|---|
| | 1-beginning (beginning of year 1 FCs) | 1-end (end of year 1 FCs) | 2-end (end of year 2 FCs) | 3-end (end of year 3 FCs) |
| Cash | 0 FC | 450 FC | 990 FC | 1,638 FC |
| Building | 1,000 | 1,200 | 1,440 | 0 |
| Accumulated depreciation | 0 | (400) | (959) | 0 |
| Total assets | 1,000 | 1,250 | 1,471 | 1,638 |
| Initial equity | 1,000 | 1,200 | 1,440[a] | 1,728[c] |
| Increments from prior years' operations | — | — | 60[b] | 37[d] |
| Beginning equity | 1,000 | 1,200 | 1,500 | 1,765 |
| Current year income/loss | — | 50 | (29) | (127) |
| Total equity | 1,000 | 1,250 FC | 1,471 FC | 1,638 FC |
| Income statements (FC) | | | | |
| Revenues | | 493 FC | 592 FC | 710 FC |
| Depreciation expense | | (400) | (480) | (577) |
| Operating income | | 93 | 112 | 133 |
| Purchasing power gain (loss) | | (43) | (141) | (260) |
| Net income (loss) | | 50 FC | (29) FC | (127) FC |

[a] 1,000 FC × 144/100
[b] 50 FC × 144/120
[c] 1,000 FC × 172.8/1,000
[d] (50 FC × 172.8/120) + (−29 FC × 172.8/144)

The SFAS No. 8 method reports a constant amount of depreciation expense, while SFAS No. 52 reports a rapidly declining depreciation expense. The RTR method reports a slowly declining depreciation expense due to the foreign currency's reduction in value relative to the dollar in real terms.

Because of the foregoing, the SFAS No. 8 and SFAS No. 52 methods report an increasing trend for operating income; under the RTR method, however, operating income shows a declining

**Exhibit 3. Comparative Income Statements in U.S. Dollars Presented as of the End of Year 3**

| | Year 1 | Year 2 | Year 3 |
|---|---|---|---|
| RTR method | | | |
| Revenues | $1,039[a] | $ 988 | $ 938[e] |
| Depreciation expense | (843)[b] | (801) | (762)[f] |
| Operating income | 196 | 187 | 176 |
| Purchasing power loss | (91)[c] | (235) | (343)[g] |
| Exchange rate loss | (133)[d] | (132) | (123)[h] |
| Net income (loss) | $ (28) | $ (180) | $ (290) |
| SFAS No. 8 method | | | |
| Revenues | $ 842 | $ 880 | $ 920 |
| Depreciation expense | (666) | (666) | (668) |
| Operating income | 176 | 214 | 252 |
| Purchasing power loss | — | — | — |
| Translation loss | (58) | (162) | (258) |
| Net income (loss) | $ 118 | $ 52 | $ (6) |
| SFAS No. 52 method | | | |
| Revenues | $ 842 | $ 880 | $ 920 |
| Depreciation expense | (623) | (543) | (474) |
| Operating income | 219 | 337 | 446 |
| Purchasing power loss | — | — | — |
| Translation adjustment | — | — | (838) |
| Net income (loss) | $ 219 | $ 337 | $ (392) |

[a] 450 FC (see Exhibit 1) × 120/1.09545 × 1.742 $/FC × 133.1/110
[b] 333 FC (see Exhibit 1) × 120/100 × 1.742 $/FC × 133.1/110
[c] 450 FC (see Exhibit 1) × .09545 × 1.742 $/FC × 133.1/110
[d] 1,200 FC (see Exhibit 2) × (1.742 $/FC − 1.833 $/FC) × 133.1/110
[e] 648 FC (see Exhibit 1) × 172.8/157.744 × 1.321 $/FC
[f] 334 FC (see Exhibit 1) × 172.8/100 × 1.321 $/FC
[g] [(990 FC (see Exhibit 1) × .2) + (648 FC (see Exhibit 1) × .09545)] × 1.321 $/FC
[h] 1,765 FC (see Exhibit 2) × (1.321 $/FC − 1.390 $/FC)

trend. As with revenue, this declining trend is appropriate because the foreign currency lost value in real terms relative to the U.S. dollar.

Both the SFAS No. 8 and RTR methods report translation or exchange losses. Under SFAS No. 8, these translation losses increase each year, although real equity exposed to exchange fluctuations

**Exhibit 4. Comparative Balance Sheets in U.S. Dollars Presented as of the End of Year 3**

| | Beginning of year 1 | End of year 1 | End of year 2 | End of year 3 |
|---|---|---|---|---|
| RTR method | | | | |
| Cash | $ 0 | $ 948 | $1,652[b] | $2,164 |
| Building | 2,662[a] | 2,529 | 2,402[c] | 0 |
| Accumulated depreciation | 0 | (843) | (1,600) | 0 |
| Total assets | $2,662 | $2,634 | $2,454 | $2,164 |
| Initial equity | 2,662 | 2,662 | 2,662[d] | 2,662 |
| Retained earnings | 0 | (28) | (208)[e] | (498) |
| Total equity | $2,662 | $2,634 | $2,454 | $2,164 |
| SFAS No. 8 method | | | | |
| Cash | $ 0 | $ 784 | $1,502 | $2,164 |
| Building | 2,000 | 2,000 | 2,000 | 0 |
| Accumulated depreciation | (0) | (666) | (1,332) | 0 |
| Total assets | 2,000 | 2,118 | 2,170 | 2,164 |
| Initial equity | 2,000 | 2,000 | 2,000 | 2,000 |
| Retained earnings | 0 | 118 | 170 | 164 |
| Total equity | $2,000 | $2,118 | $2,170 | $2,164 |
| SFAS No. 52 method | | | | |
| Cash | $ 0 | $ 784 | $1,502 | $2,164 |
| Building | 2,000 | 1,742 | 1,517 | 0 |
| Accumulated depreciation | (0) | (580) | (1,010) | 0 |
| Total assets | 2,000 | 1,946 | 2,009 | 2,164 |
| Initial equity | 2,000 | 2,000 | 2,000 | 2,000 |
| Retained earnings | 0 | 219 | 556 | 164 |
| Translation adjustment | 0 | (273) | (547) | 0 |
| Total equity | $2,000 | $1,946 | $2,009 | $2,164 |

[a] 1,000 FC (see Exhibit 1) 100/100 × 2 $/FC × 133.1/100
[b] 990 FC (see Exhibit 1) × 1.517 $/FC × 133.1/121
[c] 1,000 FC (see Exhibit 1) × 144/100 × 1.517 $/FC × 133.1/121
[d] $2,000 (initial dollar investment) × 133.1/100
[e] From Exhibit 3 (28) + (180)

slowly declines and the foreign currency declines relative to the dollar at a constant rate. On the other hand, actual exchange rate losses reported by the RTR method are of approximately the same magnitude and slowly decline. This slowly declining trend is appropriate since the foreign currency lost value relative to the U.S. dollar at a constant rate and at the same time real equity exposed to exchange fluctuations slowly declined. The SFAS No. 52 method reports no gain or loss related to translation on the income statement until the third year. A translation adjustment is reported as part of equity until the subsidiary is liquidated. At that time, the accumulated adjustments are reported as part of income. Had the parent continued its investment, the translation adjustment would have continued to be reported on the balance sheet even after the sale/abandonment of the building, and the income statement for year three would have reported net income of $446.

Neither the SFAS No. 8 nor SFAS No. 52 method reports purchasing power gains/losses incurred by holding net monetary items during a period of changing prices. The RTR method reports such gains/losses. Because the RTR method distinguishes between purchasing power gains/losses and exchange rate gains/losses, users of the financial statements should better understand the distinct types of risks facing a foreign operation. Such information would also be useful to management in its attempt to measure and limit such exposure through hedging activities.

Net income for all three years totals $164 under both SFAS No. 8 and SFAS No. 52 (assuming liquidation of the subsidiary), but the income patterns vary. The SFAS No. 8 method reports a declining trend each year, while the SFAS No. 52 method reports an increasing trend until the year of liquidation when the equity translation adjustments are passed through income. In that year, a large loss is reported. The RTR method reports a three-year real loss of $498. The yearly patterns reflect increasing losses — due principally to holding an ever-larger net monetary asset position during an inflationary period, thus incurring purchasing power losses.

Turning to the balance sheet information presented in Exhibit 4, the accumulated depreciation under the SFAS No. 8 methodology equals the total of depreciation expense reported in the income statements, while similar results are not obtained under either SFAS No. 52 or the RTR method. SFAS No. 52 requires the assets in the balance sheet (and related accumulated deprecia-

tion) to be translated at year-end rates, while the expense in the income statement is translated at average rates for the year. The difference becomes part of the translation adjustment in the stockholders' equity. While the RTR method uses year-end rates for both calculations (i.e., accumulated depreciation at year end and depreciation expense), the accumulated depreciation at the *beginning* of the year is translated at beginning-of-the-year rates. The difference becomes part of the reported exchange rate loss or gain when the exchange rate changes are not in proportion to the inflation rates.

The building is reported on the balance sheets at the same figure each year (excluding depreciation) under SFAS No. 8 methodology, while SFAS No. 52 and the RTR methods reflect (in this example) decreasing figures for the building. The SFAS No. 52 method figures for the building decrease to a much greater extent than under the RTR method since SFAS No. 52 uses exchange rates in effect at each balance sheet date, ignoring the fact that a large proportion of the exchange rate changes was due to inflation. In the RTR method, the building amounts decrease only because the value of the foreign currency relative to the U.S. dollar decreased more than could be attributed to the 20 percent foreign inflation versus the 10 percent U.S. inflation. Had the exchange rates varied exactly in proportion to the inflation rates, the RTR method would reflect the building at the same amount each year. The change in the building figures is reflected as part of the exchange rate loss.

## A VARIATION OF THE RTR METHOD

We suggest translating income statement accounts by using the actual exchange rate at the end of the period. Average rates would not be appropriate since the foreign currency statements have been price level adjusted to end-of-year amounts.

It would be possible, and conceptually supportable, to translate the income statement accounts using the expected end-of-year rates that would have existed had the exchange rates varied exactly in proportion to the changes in the inflation rates of the nations involved. If such a course were followed, the exchange rate gain or loss would be calculated by using the end-of-year (rather than beginning) price-level–adjusted net asset position times the difference between the actual ending exchange rate and the expected rate. The exchange rate gain or loss under this approach would include the gain or loss incurred during the year, related to the average net assets earned or lost during the year; however, the

revenues, expenses, gains, and losses reflected on the income statement would be hypothetical amounts (e.g., what the revenue for the year, in DC units, would have been had the exchange rates varied exactly in proportion to the related inflation rates). We chose to use actual rates so that the revenues, expenses, and so forth are reflected at the amounts actually earned during the period even though such an approach reports only the exchange rate loss related to the beginning net assets (or additional investments made during the year).

## CONCLUSION

Translation methods in widespread use yield, in many instances, results which do not reliabily reflect significant economic events which affect foreign subsidiaries. Purchasing power gains and losses are not reported; amounts are labeled translation gains or losses or translation adjustments which resemble real exchange rate gains or losses only by accident; real gains or losses can be ignored, yet nominal gains or losses are reported; and year-to-year data on the balance sheet and income statement cannot be reliably compared in making decisions concerning the firms involved. These deficiencies arise primarily because current translation methods ignore the effect of domestic and foreign inflation on currency exchange rates.

In this paper, we have presented a new approach to the translation problem which has much appeal. Real gains and losses are separated from nominal gains and losses, and exchange rate gains and losses are defined, thus becoming directly calculable instead of being some number needed to make a balance sheet balance. Perhaps, with greater understanding of the issues, progress can be made toward a more generally accepted solution to the foreign currency statement translation problem.

# *The Real Objective of the International Accounting Standards Committee*

MICHAEL J. AITKEN and TREVOR D. WISE*

Many accounting bodies in the world are investing major amounts of resources in a time-consuming and difficult process, the formulation of accounting standards. One of the most productive of these bodies, in terms of the numbers of standards issued, is the International Accounting Standards Committee (IASC).

Between its inception and July 1985, the IASC issued twenty-four accounting standards and currently has two more in exposure draft form. A list of additional issues has been identified. Whether this high productivity can be attributed to a self-imposed sense of urgency, an enthusiasm for the task among the participating accountants, or a process which culls the best ideas from other bodies which have already "traversed the country," is not clear. But there is one thing of which there is no doubt. That body and many others are expending considerable effort in the pursuit of a goal: the harmonization of financial accounting standards in an international context.

While we note with admiration the efforts made toward this goal, we feel obliged to question what the benefits are that might be claimed to accrue from the issue of international standards by the IASC. We believe that identification of the benefits will demonstrate two things: first, that another, more specific and central objective can be identified, and, second, that the modus operandi of the IASC is not yet conducive to the successful attainment of that central objective.

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## THE IASC IN PROFILE

The IASC was founded on June 29, 1973, through the combined efforts of the national accounting bodies of nine countries: Australia, Canada, France, Germany, Ireland, Japan, the Netherlands, the United Kingdom, and the United States. Its origin can be traced to 1966, however, when the Accountants International Study Group was established by the national accounting bodies of the United States, the United Kingdom, and Canada. The objective of this body was to harmonize accounting in those three countries. It succeeded to the extent of issuing several accounting studies. These studies represent the first attempt at harmonizing accounting practice on an international basis.

Today, the membership of the IASC consists of approximately ninety professional associations from nearly seventy countries. Until 1977, the nine original bodies were termed "founding members," while the others were designated "associate members." After 1977, associate members were given full membership status, and the activities of the committee were assumed by a board (IASB) consisting of the nine founding members plus two elected representatives from among the other members. This structure has remained unchanged to date with one exception. In October 1981, the IASC Consultative Group, consisting of a number of nonaccounting organizations representing principal preparers and users of financial statements, was formed to extend the consultative procedures of the IASC.

Many of the efforts of the IASC are made voluntarily by members, although a small, full-time secretariat exists to administer its affairs. Accordingly, the annual budget of the IASC, financed largely by its members, is approximately $300,000, compared, for example, with the Financial Accounting Standard Board's budget of approximately $6 million.

The modus operandi of the IASC begins with the selection of issues for detailed study by steering committees. Each committee, consisting of three members from three different countries, prepares an exposure draft on its allocated subject and submits it to the board. Once the board has given its approval, with a two-thirds majority, the draft is sent to accounting bodies, governments, stock exchanges, and other interested parties for comment. These bodies are usually allowed a minimum of four months to analyze and comment on the draft. Once these comments have been received by the IASC, the steering committee examines them and makes adjustments to the draft. A final document is then prepared

and, following approval by at least three-fourths of the board, is issued as an international accounting standard. The standard is issued in the English language, with translations to other languages being made by members themselves.

## OBJECTIVES AND BENEFITS

Considering that since 1973 the IASC has released twenty-four standards and has another two presently in exposure draft form, one is not surprised that it has been called "successful" by various authors, including Cummings, Edgar, Kawaguchi, and Benson.[1] Success, like beauty, is, however, often in "the eye of the beholder," and since the beholders just mentioned are all closely aligned with the IASC, their praise must be analyzed with care.[2]

Whether or not an effort is successful depends upon one's expectations of the benefits to be gained. Because the IASC has not explicitly described the benefits resulting from its operations, that is, it has not stated why it wants to harmonize world accounting standards, we find claims of success premature. Indeed, unless one has a clear understanding of the objective, the risk exists of discovering, after much effort has been expended, that the whole project was a waste of time. It therefore seems reasonable to expect the IASC to have produced a formal statement describing the benefits of international accounting in the first years of its operation. Fortunately, in the continuing absence of such a statement, we are able to refer to the work of Islam,[3] who has compiled a list of claimed benefits and the respective claimants (Exhibit 1).

Inspection of this list not only provides an idea of the success or failure of the IASC, but it also suggests a necessary restatement of the IASC objective. Instead of simply stating that "the objective of the IASC is the harmonization of accounting standards on a worldwide basis," we believe it more accurate to state the objective as "the harmonization of accounting on a worldwide basis to improve the financial reporting and decision-making capability of multinational businesses, and investors in multinational businesses."

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[1] J. P. Cummings, "The Emergence of International Accounting Standards in the Face of Diverging National Accounting Standards," *Accountants Journal* (November 1976), 341-44; G.C. Edgar, "First Commentary," *Accountants Journal* (November 1976), 345-48; J. Kawaguchi, "Second Commentary," *Accountants Journal* (November 1976), 348-50; and Sir Henry Benson, "Sir Henry Benson Moves on from Coopers," *Accountancy* (May 1975), 49-50.

[2] Cummings and Benson are past presidents of the IASC, while Edgar and Kawaguchi have both served on steering committees.

[3] M. A. Islam, "Impediments to the Development of Effective International Accounting Standards" (Ph.D. dissertation, University of Sydney, 1981).

**Exhibit 1. Benefits Claimed to Result from the Work of the IASC**

| Benefits | Claimants |
|---|---|
| Benefit 1 — Financial statements prepared in different countries will be comparable, thereby promoting better investment and lending decisions. | Kraayenhof (1960)<br>Mueller (1961)<br>Stamp (1971)<br>Huworth (1973)<br>Trueblood (1972)<br>Hepworth (1974)<br>Cummings (1975) |
| Benefit 2 — Consolidation of foreign subsidiaries will be facilitated. | Kraayenhof (1960)<br>Mueller (1961)<br>Spacek (1971)<br>Shashikata (1972) |
| Benefit 3 — The need to prepare multiple sets of financial statements for companies seeking registration in foreign stock exchanges will be removed. | Mueller (1961) |
| Benefit 4 — Management decisions in multinationals will be improved. | Stamp (1971)<br>Huworth (1973) |
| Benefit 5 — Confusion with phrases such as "generally accepted accounting principles" and "auditing standards," which may be foreign to some statement users, will be eliminated. | Weston (1965)<br>Iwamura (1972) |
| Benefit 6 — Developing countries will benefit from more sophisticated standards and extended disclosure requirements. | Baaccouche (1969)<br>Mahon (1973)<br>Benson (1975) |

Since the first four of the six identified benefits support this restated objective, we feel success or failure judgments may be made only after observing the degree of compliance with the IASC standards by multinationals. A number of studies (Chang and Most, Lafferty and Cairns, and Mueller[4]) have indicated the degree of compliance to be low. We unavoidably conclude that the efforts of the IASC to date have been largely ineffectual in achieving its central objective.

To us, the prime cause of the IASC's failure has been its structure. The board and committee structure of the IASC has not involved, in any direct sense, the people and organizations who will be most affected by IASC decisions, namely the multinational enterprises and investors in multinationals. Until October 1981, when this

[4] L. S. Chang and K. S. Most, "International Accounting Standards: The Case for European Oil Companies," *International Journal of Accounting* (Fall 1976).

situation was partially redressed by the advent of a consultative group, the only avenue for involvement by these parties was through the public submissions procedure following the exposure draft release to members. This led to much criticism of the IASC by non-accounting groups and institutions.[5] They claimed that the IASC was too narrowly based in that it represented only the accounting profession, while other parties with an interest in the harmonization of international accounting standards were almost totally excluded from involvement.

With the advent of the consultative group, the opportunity for greater participation by these parties in the standard-setting process has been provided. The group was created to provide the IASC with a non-accounting sounding board on issues of principle arising from the development of international accounting standards and the selection of new topics. The non-accounting organizations approached by the board for inclusion in the group have included international bodies representing business, trade unions, stock markets, and financial analysts. The group is expected to meet with the IASC once or twice a year. Significantly, however, no provision has been made for the group to contribute *directly* in the standard formulation and revision stages.

While we commend the board for its move in this direction, we feel the move has probably been too little and too late. As early as 1976, Mr. Cummings, chairman of the IASC, noted in *IASC News* (October):

> International trade and investment are at an all time high and increasing rapidly. In this climate, the challenge is clear for business firms operating in the international arena to formulate a set of rules for accounting and reporting, financial and social, in order that available capital can be best allocated.

In the intervening years, considerable harm has been dealt the IASC's cause by its continuing refusal to involve directly multinationals and other non-accounting organizations. The result has been low levels of compliance and credibility among these groups for the IASC's standards.

As the IASC itself noted in 1975, "The accounting profession cannot normally impose its view except upon its own members and the task therefore is to persuade by example, leadership, and exhortation the classes of persons . . . to support the standards."

Obviously, the one or two yearly meetings of the consultative

[5] The IASC admitted receipt of this criticism in its *IASC News* (February 1981).

group are grossly inadequate, bearing in mind the high work load and output of the IASC. We believe it would be useful to have the consultative group meet during the standard formulation stage with the steering committees. Participation at this stage would be a practical and efficient proposition. Recommendations and changes suggested by the group may be readily incorporated. Presently, the consultative group could be described as a sop to the criticism expressed by the non-accounting groups. The membership of the board and its voting procedures remain unchanged so that the accountants on the board, if they wish, can overrule suggestions and opinions emanating from the consultative group. Evidence of a greater commitment to wider representation might have come through the actual inclusion of representatives of the consulting group on the board, accompanied by transfer of the voting rights.[6] Further, the IASC has not changed its categorical statement that it is the responsibility of its members, who are professional accounting bodies, to convince business to comply with the international standards. We would have expected the IASC to begin sharing the responsibility with non-accounting groups.

## CONCLUSION

After examining the list of benefits claimed to be actually and potentially associated with the issuance of international standards, we believe that the central objective of the IASC is, in effect, "the harmonization of accounting on a worldwide basis in order to improve the financial reporting and decision-making capability of multinational businesses, and investors in multinational businesses." We also believe that the clear evidence of low compliance with the standards by multinationals indicated that the IASC has been largely unsuccessful in achieving its central objective. We attribute the blame for this to the monopoly accountants have in the standard-setting process. We view the October 1981 attempt to broaden the IASC's structure, by including a non-accountant–based consultative group into the process, as being a minimal change which is likely to have no real influence on the acceptance of international standards by multinational corporations.

---

[6] Discussion to allow up to four seats on the board to be reserved for non-professional organizations of preparers and users is currently continuing between the IASB and IFAC.

**BIBLIOGRPAHY**


Baaccouche, M. "The Need for International Accountancy." *International Journal of Accounting* (Fall 1969), 97-99.

Benson, Sir H. Interview, "Sir Henry Benson Moves on from Coopers." *Accountancy* (May 1975), 49-50.

Chang, L. S. and K. S. Most. "International Accounting Standards: The Case for European Oil Companies." *International Journal of Accounting* (Fall 1976).

Cummings, J. P. "The Emergence of International Accounting Standards in the Face of Diverging National Accounting Standards." *Accountants Journal* (November 1976), 341-44.

______. "International Accounting Standards Committee: Current and Future Developments." *International Journal of Accounting* (Fall 1975), 35-36.

Edgar, G. C. "First Commentary." *Accountants Journal* (November 1976), 345-48.

Hepworth, J. A. "Forging International Accounting Standards." *Chartered Accountant in Australia* (October 1974), 5.

Huworth, W. P. "Progress in the Development of World-Wide Accounting Standards." *International Journal of Accounting* (Fall 1973), 23.

Isalm, M. A. "Impediments to the Development of Effective International Accounting Standards." Ph.D. dissertation, University of Sydney, 1981.

Iwamura, K. "The Audit Report." *National Papers.* Tenth International Congress of Accountants, 1972, 357.

Kawaguchi, J. "Second Commentary." *Accountants Journal* (November 1976), 348-50.

Kraayenhof, J. "International Challenges for Accounting." *Journal of Accountancy* (January 1960), 37.

Lafferty, M. and D. Cairns. *World Survey of Annual Reports.* London: Financial Times Business Information Ltd., 1980.

Mahon, J. J. "Ledgers as Much as Lathes." *Columbia Journal of World Business,* vol. 1, quoted in Paul Garner, *The Development of International Accounting Standards and Conventions — Past Accomplishments and Future Potentials and Strategies.* The University of Alabama, 1973.

Mueller, Gerhard G. "Some Thoughts about the International Congress of Accountants." *Accounting Review* (October 1961), 548.

______. "International Accounting Standards and Problems." *The Accountant* (13 October 1977).

Shashikata, Y. "Information for Proprietors and Others." *National Papers.* Tenth International Congress of Accountants, 1972, 295.

Spacek, L. *The Jerusalem Conference on Accountancy.* Israel: Institute of Certified Public Accountants, 1971.

Stamp, E. "Uniformity in International Accounting Standards: A Myth or a Possibility:" *The Jerusalem Conference on Accounting.* Israel: Institute of Certified Public Accountants, 1971, 160-61.

Trueblood, R. M. "Information for Proprietors and Others." *Proceedings Tenth International Congress of Accountants* (1972), 263-64.

# *Evaluations of Accounting and Finance Journals: The Australian View*

KEITH A. HOUGHTON and RICHARD BELL*

The perceived quality of accounting and finance journals has been the subject of a number of inquiries over several years.[1] At this time, the survey studies of journal quality have been based on the evaluations of U.S. academics and have largely been evaluations of U.S. journals.[2] Little is known of the views of non–U.S. academics or of non–U.S. journals. Further, many of these studies have not measured potentially important factors that might influence the journal evaluation process. For example, an educator whose interest is finance might rate finance-oriented journals more highly than accounting-oriented journals.[3] As another example, an educator who is a member of a professional accounting body might rate professional journals more highly than scholarly (refereed) journals because of this professional allegiance.

In addition to these limitations, previous survey studies have,

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[1] R. P. Weber and W. C. Stevenson, "Evaluations of Accounting Journal and Department Quality," *Accounting Review* (July 1981), 596-612; and L. D. Brown and J. C. Gardner, "Using Citation Analysis to Assess Contributions and Journals to Accounting Research," American Accounting Association Annual Conference (Toronto, August 1984).

[2] In relation to survey studies, the only non–U.S. journal which has been regularly included is *Abacus*. An alternative type of "journal quality" research is based on citation analysis (see, for example, Brown and Gardner, "Using Citation Analysis"). This type of analysis deals with use of the material contained in journals rather than subjective perceptions.

[3] Note that Weber and Stevenson, "Evaluations of Accounting Journal," did refer to different fields of interest. Their inquiry was based on research areas.

typically, lacked two further characteristics: (1) they have tended to examine accounting as a discipline quite distinct from finance, and (2) they have not included tests comparing the characteristics of the respondents with those of non-respondents.

## STRUCTURE OF THE STUDY

A general model which might underlie academic ratings of journal quality is the following:

Rating of quality = function (journal, journal/rater interface, and rater)

The primary interest is in the impact of the journals themselves on the rating of quality; however, the model implies that this relationship will be moderated by factors pertaining to the interaction between journals and raters, and factors pertaining to the raters themselves. In terms of the facets considered in this study, Exhibit 1 presents the appropriate model.

From this, several hypotheses are proposed:

For journals:

Ho1: There are no differences between the quality ratings for different journals.

For the journal/rater interaction:

Ho2: Accounting and finance educators' quality evaluation of journals is unrelated to those educators' familiarity with those journals.

Ho3: Accounting and finance educators' quality evaluation of journals is unrelated to the frequency with which the educators read those journals.

Ho4: Accounting and finance educators' quality evaluation of

**Exhibit 1. Facet Definitions of Journal Rating Model**

| | |
|---|---|
| Rating of quality is a function of journal | *Abacus*<br>.<br>.<br>.<br>*Management Accountant* |
| A function of journal/rater interaction | Familiarity<br>Frequency read<br>Publish own work |
| A function of the raters | Area of interest<br>Rank |

journals is unrelated to the publication of the educator's own work in a journal.

And for raters:

Ho5: Ratings of journal quality are not related to educators' area of interest.

Ho6: Ratings of journal quality are not related to academic rank.

## THE SAMPLE

Periodically, the *Directory of Accounting Academics, Australia and New Zealand* is produced. The *Directory* listed 228 educators employed at Australian universities whose field of teaching was within one branch or another of accounting (including finance). Listing in the *Directory* is not related to an association membership and is without cost. It is as comprehensive a list of accounting educators in tertiary-level education in Australia as has yet been achieved within the public domain. The target population included all listed individuals.

## THE QUESTIONNAIRE

The questionnaire developed did not include a list of journals. It provided a table with twelve rows (labeled A to L) and columns for respondents to write in a journal name and rate the journal in terms of "quality," "content familiarity," "frequency read," and "published your articles." While only twelve lines were provided, respondents were given the facility to continue on the page. Almost 22 percent of respondents provided more than the twelve listings. The advantage to this open-ended format was that respondents replied in terms of journals with which they were familiar, rather than simply responding to a researcher's list. The disadvantage to the format is that the data matrix (journals by raters) is incomplete, with raters evaluating only some of the population of journals.

The questionnaires were mailed within one month of the publication of the *Directory*. Each respondent was sent a coded questionnaire, plus the instruction sheet (see Appendix), a personally addressed cover letter encouraging participation, and a postage-paid reply envelope.

## THE RESPONSE

Of the 228 questionnaires sent, 118 responses were received (53.2 percent). A number of these were discarded due to noncompletion of the tasks required. A follow-up mailing was not undertaken.

Such procedures are costly and typically achieve few additional responses. The strategy adopted was to test the known characteristics of the respondent group with those of the nonrespondents. Four variables, central to the hypotheses previously stated, were selected from the information in the *Directory.* A comparison between the nonrespondent and the respondent group was made and no statistically significant differences were found for any of the characteristics measured: teaching area ($x^2 = 4.12$, df = 7), rank ($x^2 = 5.03$, df = 6), academic and professional qualifications ($x^2 = 0.18$, df = 1).

**ANALYSIS OF RESPONSES**

In total, the 104 individuals who provided usable responses (a usable response rate of just under 47 percent), made 1,010 citations (an average of 9.7 citations per educator) involving some eighty-six journals. Only twenty-two of these journals, however, were cited by more than 10 percent of the respondent group. To ensure adequacy of cell size, the analysis that follows excludes the other sixty-four journals.[4] Even with this restriction to the more popular journals, the open-ended format of the instrument still allowed respondents not to rate some journals. This introduced problems for analysis in that cell sizes were not equal, and marginal distributions were not proportionally similar.

While the ideal test for the full model would have been an analysis of covariance with journals being tested as a repeated measures factor, and adjustments made for covariates such as familiarity and frequency of reading, this was not feasible, given the size of the problem and the non-orthogonality of the design. Accordingly, the analyses to follow should be regarded with caution.

Since the primary hypothesis concerns the effects on rated quality of the journals themselves, which may be affected by the rater/journal interaction and the rater aspects, it is appropriate to consider these latter facets briefly first.

Initially, each of the independent variables relating to hypotheses 2 through 6 were considered independently by analysis of variance and, where appropriate, regression. Exhibit 2 shows the summary of the results.

Factors pertaining to the raters (area of interest, academic rank) do not generally affect the rating of quality. Although the rater/

[4] The exclusion of these sixty-four journals introduces a bias against smaller special interest groups. The mean appraisal of such specialist journals may, however, be subject to distortion because of extreme scores of a few respondents.

**Exhibit 2. Summary Results for Effects of Rater Aspects and Rater/Journal Interface on Rating of Journal Quality When Examined Independently**

| Hypothesis | Independent Variable | F-ratio | P | Effect* | Correlation† | $R^2$ |
|---|---|---|---|---|---|---|
| 2 | Familiarity with journal content | 4.0 | .003 | .02 | .11 | .01 |
| 3 | Frequency of reading | 4.3 | .002 | .02 | .12 | .01 |
| 4 | Published therein | 21.3 | .000 | .02 | — | — |
| 5 | Area of interest | 0.2 | .92 | .02 | .01 | .00 |
| 6 | Academic rank | 0.7 | .67 | .00 | .02 | .00 |

* Effect = eta-squared
† Computed for three or more valued variables.

journal interaction factors (familiarity, frequency of reading, and whether published in) are significantly related to quality rating, the magnitude of these effects is very small. Accordingly, when considering the effects of the journals themselves on the rating of quality (hypothesis 1), the factors pertaining to raters and rater/journal interaction (associated with hypotheses 2 through 6) are ignored.

Exhibit 3 plots the mean quality evaluation of journals by the frequency of citation. It reveals that no relationship between the two exists. *The Accounting Review* can be seen to be both widely read and highly regarded, whereas the *Australian Accountant* is widely read and not perceived to be of such quality. Two groups of less widely read journals are apparent, one more lowly rated for quality (e.g., *Accountant's Journal, Accountant's Magazine)* the other more highly rated (e.g., *Journal of Finance, Accounting Organizations & Society, Journal of Financial Economics, Journal of Accounting and Economics).*

An analysis of the variance of quality ratings for journals was made (see Exhibit 4). Since this was not strictly appropriate since it ignored the within rater effect, care should be taken in drawing definitive conclusions from the results derived.

The journals themselves appeared to account for approximately one-half of the variation in the ratings; this was significant. Subject to the difficulties noted earlier, the first null hypothesis was rejected (i.e., there were differences between journals in rated quality). The question remained, however, as to the significance of these differences. Accordingly, a multiple range test using the Scheffe procedure was made. The Scheffe procedure[5] is one of a number

[5] H. Scheffe, "A Method for Judging All Contrasts in the Analysis of Variance," *Biometrika*, vol. 40 (1953), 87-104.

**Exhibit 3. Journal: Frequency of Citation Mean Evaluation**

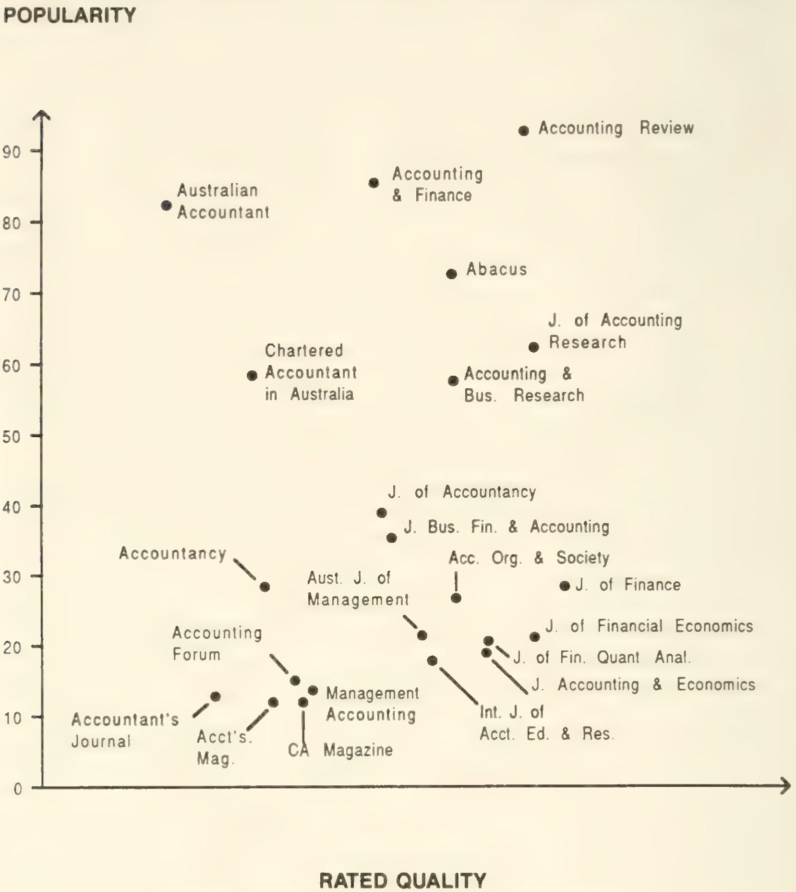



**Exhibit 4. Analysis of Variance of Rated Quality between Journals**

| Source | Sums of squares | DF | Mean square | F | P |
|---|---|---|---|---|---|
| Between journals | 566.12 | 21 | 26.96 | 43.6 | 0.0 |
| Within journals | 501.35 | 811 | 0.62 | | |

of general contrast procedures which determine a general standard error for post hoc comparisons of means and then determine clusters of groups whose difference in means is less than this critical error. The Scheffe test is conservative and not affected by unequal sample sizes of the groups. Exhibit 5 presents the results which are located on a scale according to their rated mean quality.

While groups existed, only two are non-overlapping: one formed by the *Journal of Finance* through to the *Journal of Business Finance and Accounting;* the other formed by *Management Accounting* through to the *Australian Accountant.* These two groups differ principally in their orientation. The upper group includes almost all the refereed journals, while the lower group contains the professionally oriented publications.

## SUMMARY AND CONCLUSION

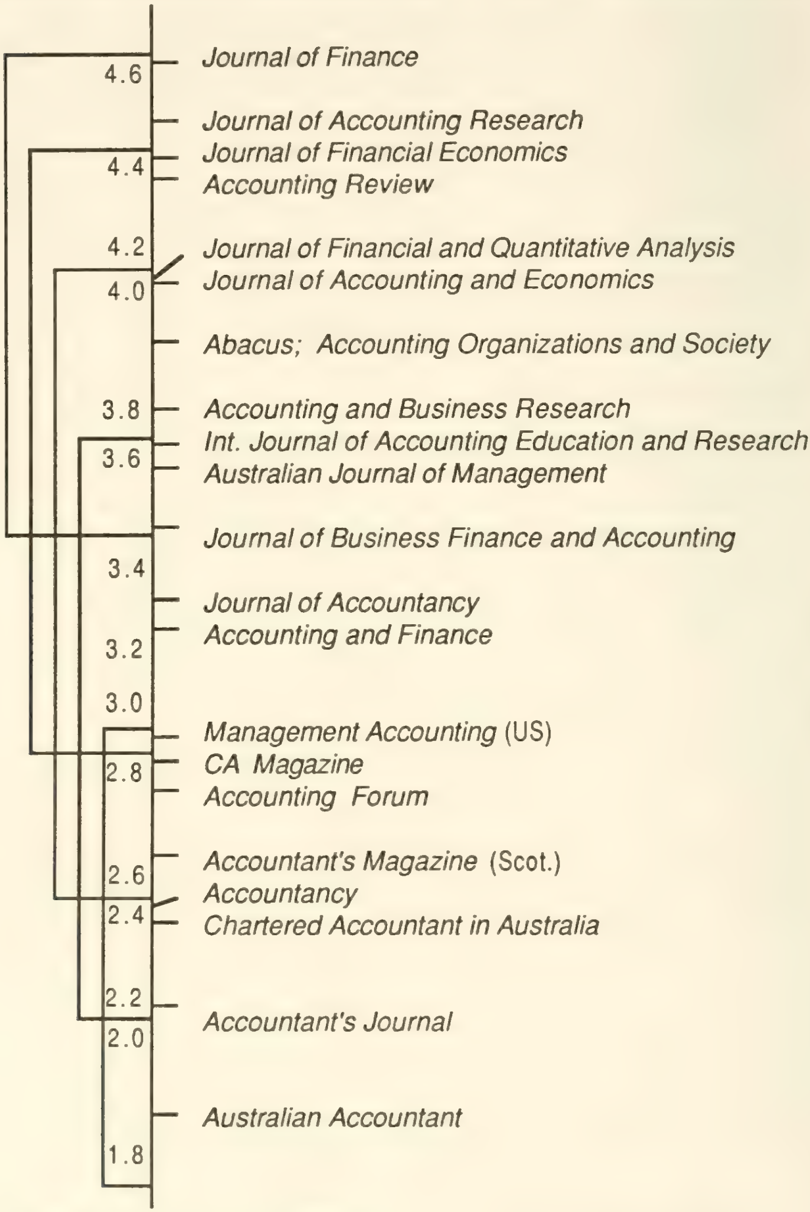
Using biographical and work experience data from the *Directory of Accounting Academics in Australia and New Zealand,*[6] the population of Australian university accounting and finance educators was surveyed. Several variables were found to relate significantly to the quality evaluation; "frequency read," "content familiarity," and "has the journal published your work" are all highly significant. Most of the variance of raters' evaluations, however, appear to be explained by the journals themselves. Quality ratings given to refereed journals seemed to be significantly higher than those of professional journals.

There is almost always reason to be cautious with the results of a study of this kind. While the project was conducted with care, the validity of the results rests very largely on the accuracy of the responses of the educators who participated. Given that there are few, if any, effective benefits or costs to completing questionnaires, it would be overly optimistic to believe that some respondents did not intentionally or unintentionally misrepresent their opinion. In addition, and perhaps more significantly, the design of the instrument resulted in differing cell size in the data matrix and consequent problems with analysis.

---

[6] A. Davison, ed., *Directory of Accounting Academics, Australia and New Zealand* (University of Western Australia, School of Commerce, 1982).

**Exhibit 5. Scheffe Multiple Ranges and Scaled Representation of Journal Quality**



## APPENDIX

Of the journals you read, please list (in column 1 of the attached form) those which you consider to be within the general area of accounting and finance and (in column 2) rate them in terms of the *quality* of their content on a scale 1 (low quality) to 5 (high quality).

Consider the following two fictitious journals as example. If you consider that the *Accounting Fraternity's Journal* was of medium quality and the *Journal of Political Accounting* was of excellent quality, this would be shown as:

| | Column 2<br>QUALITY<br>1 to 5<br>low high |
|---|---|
| I. *Accounting Fraternity's Journal* | 3 |
| II. *Journal of Political Accounting* | 5 |

Similarly, for the journals you have listed, please indicate (in column 3) the extent to which you are *familiar* with the contents of each journal on a scale of 1 (low familiarity) to 5 (high familiarity). For example, if you occasionally skim through the contents page of the *Accounting Fraternity's Journal* but read all of the articles in the *Journal of Political Accounting*, this would be shown as:

| | Column 3<br>CONTENT<br>FAMILIARITY<br>1 to 5<br>low high |
|---|---|
| I. *Accounting Fraternity's Journal* | 1 |
| II. *Journal of Political Accounting* | 5 |

Closely associated with the concept of familiarity is that of frequency read. Please indicate (in column 4) the *frequency* with which you read the journals in your list, relative to the number of issues available to be read. Again, use the scale 1 (low frequency) to 5 (high frequency). For example, if you read only a few of the issues of the *Accounting Fraternity's Journal* but read every issue of the *Journal of Political Accounting*, this would be shown as:

| | Column 4<br>FREQUENCY<br>READ<br>1 to 5<br>low high |
|---|---|
| I. *Accounting Fraternity's Journal* | 1 |
| II. *Journal of Political Accounting* | 5 |

Finally, could you please indicate whether you have published a paper(s) (notes or articles) in any of these journals by ticking ($\surd$) against the relevant journal (in column 5).

If for any reason you are unable to complete the form, would you please return it.

## INSTRUCTIONS TO AUTHORS

All manuscripts submitted for consideration should be typed on 8½ x 11″ paper and should be double-spaced throughout, including synopsis, footnotes, and bibliography. At least two copies should be submitted for review. Margins should be appropriately wide to facilitate editing. The title of the paper, the author's name, rank, and affiliation, and any acknowledgments should appear on the first page of the body of the manuscript. All pages, as well as bibliography, exhibits, and appendices, should be serially numbered. The beginning of each paragraph should be indented. Footnotes may be placed either at the bottom of the appropriate page, or on a separate page. Each manuscript should be accompanied by a brief synopsis of the article explaining its international significance.

### HEADINGS

All major headings within the manuscript should be in capital letters. They should not be numbered. Subheadings should be in capital and lower case letters on a separate line beginning at the left margin. If third-level headings are used, they should begin at the left margin and should end with a period. The text will follow on the same line immediately.

### EXHIBITS

Each exhibit should be titled and numbered. A textual reference should be made to each exhibit. It would be helpful if the author would indicate by marginal notation where each exhibit should be placed. These instructions will be followed as printing practices allow.

### FOOTNOTES

Footnotes should be numbered consecutively throughout the manuscript with superscript arabic numerals. Citations should not be made in brackets in the text. Mathematical symbols should not have footnote numbers attached. Entries for books should include author's name, title of the work underlined, and, in parentheses, place of publication, name of publisher, and date of publication. For journals, author's name, title of article within quotation marks, title of journal underlined, date of issue in parentheses, and page numbers should be included. Please see the following examples.

[1] William A. Dymsza, <u>Multinational Business Strategy</u> (New York: McGraw-Hill, 1972), 49-53.
[2] Geoffrey Holmes, "Replacement Value Accounting," <u>Accountancy</u> (March 1972), 4-8.

### BIBLIOGRAPHY

Manuscripts may include a bibliography at the end of the paper. If so, such references are not to be limited to those references cited in the text. Each entry should contain all data necessary for identification. Citations should be arranged in alphabetical order. Multiple works by the same author should be listed according to chronological order of publication. Examples are listed below.

Robert L. Aliber and Clyde P. Stickney. "Accounting Measures of Foreign Exchange Exposure — The Long and Short of It." Accounting Review, January 1975, pp. 44-57.

American Institute of Certified Public Accountants. Accounting Research Bulletin No. 43. New York: AICPA, 1953.

______. "Financial Statements Restated for General Price Level Changes." Statement of the Accounting Principles Board No. 3. New York: AICPA, 1969.

Leonard Lorensen and Paul Rosenfield. "Management Information and Foreign Inflation." Journal of Accountancy, December 1974, pp. 98-102.

Lawrence Revsine. Replacement Cost Accounting. Englewood Cliffs, N.J.: Prentice-Hall, 1973.

## MATHEMATICAL NOTATION

Mathematical notation should be stated as simply as possible so as to simplify typesetting. Alignment should clearly indicate superscripts and subscripts. Equations which are numbered should have the numbers in parentheses flush with the right-hand margin.

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# *Contents*

# *Interim Earnings Announcements in the United States by Non–U.S. Multinational Corporations — Responses by the U.S. Securities Market*

GARY MEEK*

Corporations are increasingly securing capital beyond the boundaries of their respective countries of domicile. Due primarily to the intensified competition among firms for investment funds, companies no longer look strictly to home markets for their financing requirements — they list their equity securities on "foreign" stock markets, tap the bond markets of other countries, and arrange for loans from banks outside their own national boundaries. At the same time, investors are increasingly diversifying their portfolios internationally. More and more, investors are purchasing securities issued by corporations domiciled in other than the home country to achieve diversification benefits over and above those afforded by investments in domestic firms only.

In this age of global financing strategies by corporations and transnational portfolio investments by investors, the problem of *transnational financial reporting* has emerged. On the one hand, corporations are faced with a responsibility for reporting financial data to various national audiences of interest; on the other, investors and financial analysts are finding that such data are not always what they are accustomed to seeing from their domestic companies. Transnational financial reporting issues arise any time a company domiciled in one country has financial reporting responsibilities to investors in another country.

* Gary Meek is Associate Professor of Accounting, Oklahoma State University.
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That a problem exists at all is due to the numerous differences in the way that companies in different countries report their operating results. Such diversity in accounting principles and reporting practices is well documented.[1] Accounting must be responsive to the environment in which it operates if it is to be socially relevant as a communicative device. In general, the diversity in accounting principles and practices is a direct result of differing economic, social, and political environments found in the countries around the world.

As long as the corporation, as the supplier of financial information, and the investor, as the user of financial information, are from the same country, financial reporting problems remain much less complicated than when the corporation and investor come from different countries. As Mueller and Walker state,

> The problem unique to transnational financial reporting, as opposed to financial reporting within a country, is that those interested in the financial reports "read" these reports with eyes and minds accustomed to reading reports which are apparently similar but which are in fact different in their foundations owing to different customs, different cultural heritages, different "accounting principles" and different legal requirements. It is not just that the reports crossing national lines need to be stated in different languages and different currencies to be meaningful but, rather, that they must be "translated" in such a way that the underlying events and their consequences will be communicated to audiences whose experiences and education in financial reporting differ from those of the reporters. In other words, the problem is to convey to a "foreign" reader the same message as would be received by a native reader.[2]

How best to report to users in other countries is an issue of continuing controversy.

A review of the literature dealing with transnational financial reporting indicates that nearly all of it deals with the subject from the perspective of the corporation (the supplier of financial information). The annual report to shareholders has received most of the attention. For example, Bedford and Gautier[3] document dif-

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[1] See, for example, C. W. Nobes and R. H. Parker, *Comparative International Accounting* (Homewood, Ill.: Irwin, 1981); R. D. Fitzgerald, A. D. Stickler, and T. R. Watts, *International Survey of Accounting Principles and Reporting Practices* (London: Price Waterhouse International, 1979); American Institute of Certified Public Accountants, *Professional Accounting in 30 Countries* (New York: AICPA, 1975); and Steven Zeff, *Forging Accounting Principles in Five Countries: A History and an Analysis of Trends* (Champaign, Ill.: Stipes Publishing, 1971).

[2] Gerhard G. Mueller and Lauren M. Walker, "The Coming of Age of the Transnational Financial Reporting," *Journal of Accountancy* (July 1976), 73.

[3] Norton M. Bedford and Jacques P. Gautier, "An International Analytical Comparison of the Structure and Content of Annual Reports in the European Economic Community, Switzerland, and the United States," *International Journal of Accounting* (Spring 1974), 1–44.

ferences in the content and structure of annual reports of companies from the European Economic Community, Switzerland, and the United States. Barrett[4] analyzes annual report disclosure of companies from seven industrialized countries and finds variations in the level of disclosure across countries, as well as a general improvement in the extent and quality of disclosure over the time period studied. Mueller, Gernon, and Meek[5] classify six approaches used by the world's multinationals through the annual report medium in reporting their operating results to audiences in other than the home country. These are (1) do nothing, (2) prepare "convenience translations," (3) prepare "convenience statements," (4) restate on a limited basis, (5) prepare "secondary" financial statements, and (6) prepare financial statements according to "world" accounting principles. Focusing on financial reporting media other than the annual report, Meek[6] documents how certain non–U.S. multinationals publicly announce annual earnings to the financial press in various countries and examines how well these companies comply with reporting requirements in their annual filings with the U.S. Securities and Exchange Commission.

Although corporate responses to transnational financial reporting problems have received attention, little research has focused on the user. As a result, we know very little of how investors (users) respond to financial reporting by "foreign" corporations. A previous project by this author[7] investigates the impacts of both public annual earnings announcements and the required annual filing (Form 20-K)[8] with the U.S. Securities and Exchange Commission (SEC) by *non–U.S.* multinational corporations on their *U.S.* share prices. The results of the project indicate that the public announcements of annual earnings contain information useful to stock market investors and that this information is impounded in the companies' U.S. share prices. Interestingly, most of the earnings

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[4] M. Edgar Barrett, "Financial Reporting Practices: Disclosure and Comprehensiveness in an International Setting," *Journal of Accounting Research* (Spring 1976), 10–26.

[5] Gerhard G. Mueller, Helen Gernon, and Gary Meek, *Accounting: An International Perspective* (Homewood, Ill.: Irwin, 1986), 27–36.

[6] Gary Meek, "The Multiple Earnings Announcements of Non–U.S. Multinational Enterprises — Implications of Observed Patterns," *International Journal of Accounting* (Fall 1983), 115–30.

[7] Gary Meek, "U.S. Securities Market Responses to Alternate Earnings Disclosures of Non–U.S. Multinational Corporations," *Accounting Review* (April 1983), 394–402.

[8] During the time period studied, Form 20-K was the annual report for foreign private issuers. It is the counterpart to Form 10-K for U.S. and certain other North American companies. The SEC recently replaced the 20-K with Form 20-F.

amounts are calculated using the generally accepted accounting principles (GAAP) of the companies' home countries, not the GAAP of the United States; finding that the U.S. security market impounds the information contained in earnings amounts which may not be based on U.S. GAAP is an interesting, new finding. Even more significant, however, is the study's evidence that the market behaves *similarly* to income numbers produced by U.S. firms using U.S. GAAP and by non–U.S. firms using (in most cases) non–U.S. GAAP. The study could detect no response to the Form 20-K filing with the SEC, however.

## RESEARCH MOTIVATION

The present research study expands this author's earlier work in two ways. First, it focuses on interim earnings announcements. If *annual* earnings announcements by non–U.S. companies contain information impounded by the U.S. securities market, the next logical step is to examine whether *interim* earnings announcements do as well. Given that annual earnings announcements affect non–U.S. firms' U.S. share prices, one may expect that the interim earnings announcements of the firms should affect their share prices, also. Such a finding would be consistent with studies focusing on U.S. firms.[9] Interim announcements are more timely than the annual announcements, and thus, may have more "surprise value." Such a result is not a foregone conclusion, however. Interim announcements may be more timely than annual announcements, but they are also less reliable. In general, a relationship exists between a reporting period's time length and the reliability of its accounting earnings number — the shorter the time period, the less reliable is the earnings amount, and vice versa. If interim announcements are not reliable enough, they will be ignored by the market. Thus, an annual number could affect share prices, but an interim one would not. The first motivation for this study is to provide closure as to whether both annual and interim announcements of U.S. *and* non–U.S. firms are impounded in U.S. security prices.

[9] See, for example, Robert G. May, "The Influence of Quarterly Earnings Announcements on Investor Decisions as Reflected in Common Stock Price Changes," Empirical Research in Accounting: Selected Studies, 1971, Supplement to Vol. 9, *Journal of Accounting Research*, 119–63; Jack E. Kiger, "An Empirical Investigation of NYSE Volume and Price Reactions to the Announcement of Quarterly Earnings," *Journal of Accounting Research* (Spring 1972), 113–28; and Philip Brown and John W. Kennelly, "The Information Content of Quarterly Earnings: An Extension and Some Further Evidence," *Journal of Business* (July 1972), 403–15.

Secondly, the present study also examines whether nationality affects the overall results that are obtained. The data from both this and the earlier study are partitioned by home country of the companies involved. There are reasons why such a partitioning is potentially interesting. The information that companies release is affected by their home country's reporting environment and GAAP.[10] If one were to find that the overall results hold separately by home country, it would seem that, at least for these firms and nations, intercountry differences do not critically affect the informativeness of the earnings announcement. On the other hand, one may find reactions for some countries and nonreactions for others. Studies by Lev and Yahalomi[11] and by Deakin, Norwood, and Smith[12] fail to detect reactions to corporate earnings releases by Israeli firms on the Tel Aviv Stock Exchange and by Japanese firms on the Tokyo Stock Exchange, respectively. However, reactions on the London Stock Exchange to earnings announcements by British firms are documented by Firth[13] and by Maingot.[14] Thus, there are reasons to suspect that the overall results may be "driven" by firms from certain countries. The results of the partitioning should be helpful for future research efforts on transnational financial reporting.

The research reported in this paper is part of a continuing effort

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[10] As explained later, firms from Israel, Japan, the Netherlands, the Philippines, and the United Kingdom are the subject of both this and the earlier study. A number of researchers have clustered countries by similarities in the reporting practices of their business firms. For example, the Netherlands and the United Kingdom are clustered into one group, and Japan, the Philippines, and United States into another in R. D. Nair and Werner G. Frank, "The Impact of Disclosure and Measurement Practices on International Accounting Classifications," *Accounting Review* (July 1980), 426–50. In C. W. Nobes, *International Classification of Financial Reporting* (London: Croom Helm, 1984), the Netherlands is likewise clustered with the United Kingdom, the Philippines with the United States, but Japan is placed in a separate group. (None of the clustering studies surveyed by this author includes Israel. However, Israeli accounting has been influenced by both the United Kingdom and the United States.)

[11] Baruch Lev and Baruch Yahalomi, "The Effect of Corporate Financial Statements on the Israeli Stock Exchange," *Management International Review* (1972/2-3), 145–50.

[12] Edward B. Deakin, Gyles R. Norwood, and Charles H. Smith, "The Effect of Published Earnings Information on Tokyo Stock Exchange Trading," *International Journal of Accounting* (Fall 1974), 123–36.

[13] Michael A. Firth, "The Impact of Earnings Announcements on the Share Price Behavior of Similar Type Firms," *Economic Journal* (June 1976), 296–306.

[14] Michael Maingot, "The Information Content of UK Annual Earnings Announcements: A Note," *Accounting and Finance* (May 1984), 51–58. The author of the current study is unaware of securities market research on the effects of earnings announcements in the two other home countries represented — the Netherlands and the Philippines.

focusing on the impact of transnational financial reporting on *users* of such information. It adds to our knowledge of the kinds of information found useful by international investors.

## THE RESEARCH DESIGN

The proposed research is based on the so-called "security price research paradigm" and relies on the method first employed by Beaver[15] and subsequently used in numerous other studies. The method rests on the following propositions (somewhat oversimplified):

1. The "value" of a security to an individual investor is determined by that individual's perceptions of both the security's future returns to him and the inherent risks associated with those returns.
2. When the "value" of a security to an investor does not equal its market price, the investor either buys or sells the security, depending on the direction of the inequality.
3. In the aggregate, the buy/sell activities of all investors change the price of the security.
4. When information events occur which alter perceptions (or expectations) about future returns or their riskiness, price changes result.

Thus, observed price changes (or as they are usually reformulated, rates of return changes) coincident with new information reaching the market can provide evidence as to the impact of this information on aggregate expectations. In general, "out-of-the-ordinary" changes in prices (returns) concurrent with the release of new information is prima facie evidence that the information possesses "surprise value" to the market. Contrarily, the absence of price changes suggests that the information is ignored by the market.

## THE DATA

The companies to be included in the study consist of those whose shares are traded on the New York and American Stock Exchanges and which are based in countries whose GAAP and disclosure practices differ from those of the United States. The first criterion is necessary because security returns data for AMEX and NYSE firms are readily available from the CRSP[16] tape. The second

[15] William H. Beaver, "The Information Content of Annual Earnings Announcements," Empirical Research in Accounting: Selected Studies, 1968, Supplement to Vol. 6, *Journal of Accounting Research,* 87–92.

[16] Center for Research in Security Prices (CRSP), Daily Stock Returns Files and Daily Stock Index File (Chicago: Graduate School of Business, University of Chicago).

criterion is imposed because one intention of this study is to examine stock market behavior toward companies whose accounting practices are potentially unfamiliar to U.S. investors. In Meek,[17] twenty-six firms from five countries were studied over the period 1968 through 1979. The same firms and time period are used for this study as in the previous study in order to compare the results more readily. The firms and countries are listed in the Appendix. The period represents a time when transnational investing, as well as interest in transnational financial reporting, intensified.

The dates of the firms' first quarter, semiannual, and third quarter earnings announcements were taken from the *Wall Street Journal Index.*[18] Selected dates were verified on a test basis by reference to the specific issue of the *Wall Street Journal.* Earnings announcements were eliminated if, during the two-week period surrounding the announcement, an announcement of dividends, stock dividends, and/or stock splits was also made. This was done to overcome the possibility that any observed reactions were really joint reactions to the earnings announcement *and* one or more of the other announcements. In all, 183 first quarter, 191 semiannual, and 171 third quarter announcements were gathered.

These dates were then used to construct configurations whereby security returns were aligned using the day of the announcement as a centering point. The returns were obtained from the daily CRSP tape, and transformed into "three-day" returns[19] as per the following:

$$\prod_{t=1}^{3} (1 + r_{i,t}) - 1$$

where $r_{i,t}$ = the return of security $i$ on day $t$,
$t = 1, 2, 3.$

(In all cases, the "disclosure period" consists of the day prior to, the day of, and the day following the announcement.)[20]

[17] Meek, "U.S. Securities Market Responses."

[18] Although most of the firms announced earnings quarterly, some only announced half-year information. Thus, the "semiannual" announcement encompasses half-year and second quarter announcements.

[19] Studies similar to this one have typically used a one-day holding period (i.e., daily returns) or a one-week holding period (weekly returns). The choice of holding period is arbitrary, but the shorter the time period, the more precisely the researcher can specify when (if at all) information is impounded in security prices. The date that an earnings announcement is published in *The Wall Street Journal* is not necessarily the day that a company formally announces earnings to the public. The reason for using three-day returns was the inability to specify the specific day that the interim earnings amounts actually became public.

[20] It was unnecessary to adjust returns using the familiar "market model" for the

## RESEARCH METHODS AND FINDINGS — ALL DATA

This study uses two sets of statistical tests to assess the impact of interim earnings announcements by non–U.S. companies on their U.S. share prices. The first set seeks to determine whether, *on average,* the reporting events are associated with unusual securities behavior. The second set complements the first in that it is designed to determine *how often* the reporting events are associated with unusual returns behavior. In each case, "unusual behavior" means an abnormally large positive or negative return in the period that the piece of information is disclosed. Each set of tests employs configurations of fifteen three-day returns, with seven on each side of the disclosure period.

The rest of this section describes the statistical tests, discusses the rationale for using two sets of tests, and presents the overall results for the entire data set. The next section presents results when the data are partitioned by country.

### First Set — Average Returns Tests

To conduct the average returns tests, the mean of the *absolute value* of the returns is computed for each of the fifteen periods, across all 183, 191, and 171 interim earnings announcement dates. Exhibits 1, 2, and 3 are graphic representations of the distribution of mean absolute returns for the first quarter, semiannual, and third quarter announcements, respectively. On the horizontal axis, the "0" (zero) Trading Period corresponds to the mean absolute return for the disclosure period; if it is "unusual," it will be large relative to those mean absolute returns around it.

If the empirical distribution of mean absolute returns surrounding the disclosure period can be assumed to be normally distributed, then the Z statistic can be used to evaluate the likelihood that the mean absolute return during the disclosure period is from the empirical distribution. That is,

$$Z = \frac{R_0 - \overline{R}}{s(\overline{R})}$$

where $R_0$ = the disclosure period mean absolute return.

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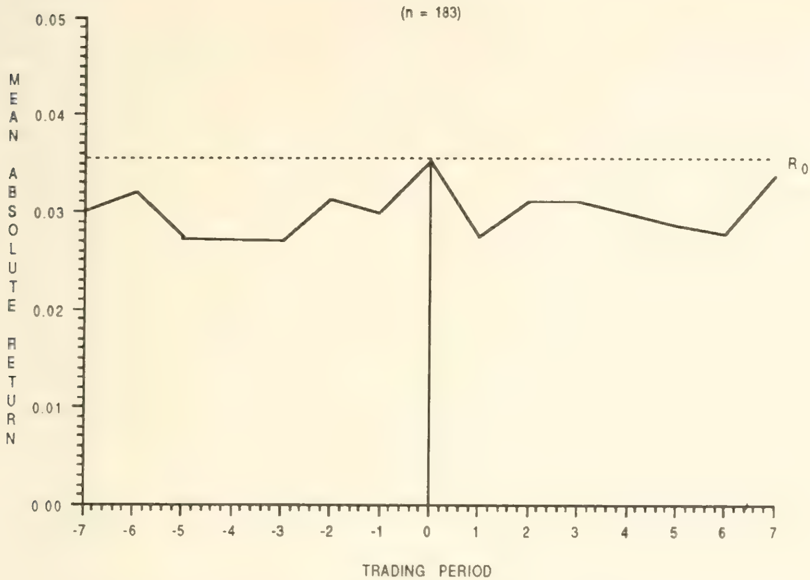
effects of the "market return." Researchers often do this to reduce the variability in their data and thereby increase the power of their statistical tests. As will be shown later, statistically significant reactions were observed, so employing this transformation process was not necessary in the circumstances. Moreover, as shown in Stephen J. Brown and Jerold B. Warner, "Measuring Security Price Performance," *Journal of Financial Economics* (8, 1980), 205–58, little may be gained by employing market-adjusted returns.

**Exhibit 1. Mean Absolute Returns Distribution**
**First Quarter Earnings Announcement**




$\overline{R}$ = the mean of the empirical distribution of mean absolute returns (excluding the disclosure period return).

$s(\overline{R})$ = the standard deviation of the empirical distribution of mean absolute returns (excluding the disclosure period return).

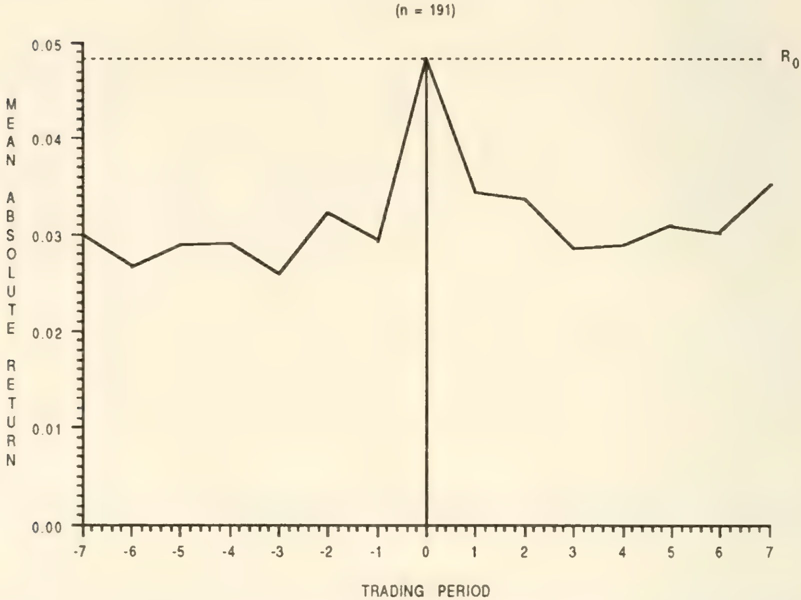
Accordingly, the Shapiro-Wilk test of normality[21] is applied to each distribution of mean absolute returns surrounding the disclosure period (but excluding the mean absolute return of the disclosure period itself). Results of this test and the related Z values for the disclosure period mean absolute returns are given in Exhibit 4.

The results of the Shapiro-Wilk test suggest that the three distributions of mean absolute returns are approximately normally distributed. Thus, the Z statistic is used to test the following null hypothesis:

$H_o$: The mean absolute return for the disclosure period comes

[21] *SAS User's Guide, 1979 Edition* (Cary, N.C.: SAS Institute, Inc., 1979), 429.

**Exhibit 2. Mean Absolute Returns Distribution**
**Semiannual Earnings Announcement**




from the distribution of mean absolute returns surrounding it.

The null hypothesis is rejected for all three interim earnings announcements. Thus, it appears that interim earnings announcements by non–U.S. firms have "information content" to the U.S. market.

### Second Set — Rankings Tests

The first approach to analyzing the data was taken for two reasons. First, the analysis of mean absolute returns across sample observations is an approach commonly employed in securities price research. As such, the analysis for this study is more directly comparable to other researchers' results. Second, the plots of average returns surrounding the reporting event can be revealing.

Nevertheless, as demonstrated in Oppong,[22] using *mean* returns across sample observations always involves a risk that a few very

[22] Andrews Oppong, "Information Content of Annual Earnings Announcements Revisited," *Journal of Accounting Research* (Autumn 1980), 574–84.

**Exhibit 3. Mean Absolute Returns Distribution Third Quarter Earnings Announcement**

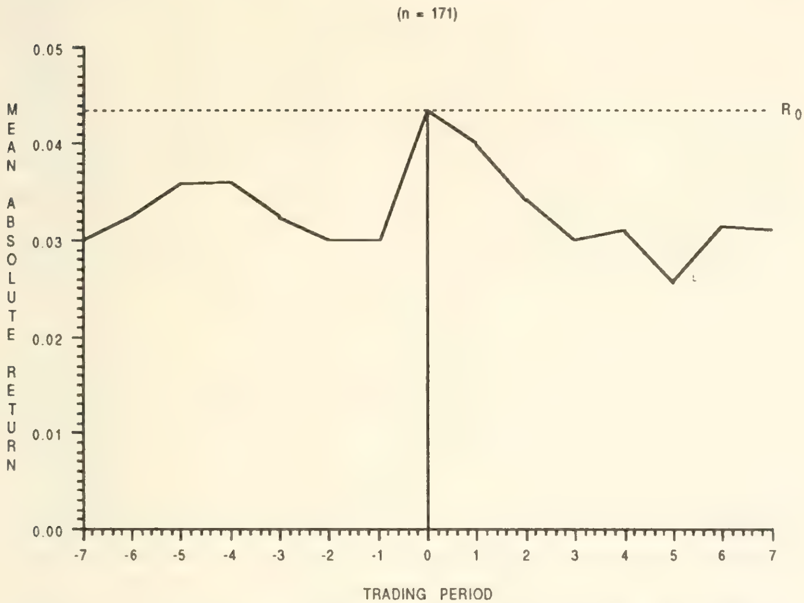



**Exhibit 4. Z Tests of the Disclosure Period Mean Absolute Returns Values, and Normality Tests of the Mean Absolute Returns Distributions for the Interim Earning Announcements**

| | n | Mean absolute return — disclosure period ($R_0$) | Z value [One-tailed probability] | Shapiro-Wilk W statistic [Probability] |
|---|---|---|---|---|
| First quarter | 183 | .0353 | 3.12 [<.01] | .935 [.41] |
| Semiannual | 191 | .0486 | 6.54 [<.01] | .927 [.35] |
| Third quarter | 171 | .0435 | 3.35 [<.01] | .946 [.49] |

large observations may be "causing" the phenomenon observed. For this reason, it is also useful to examine *how often* a phenomenon takes place, which, in the current context, means determining how often the return in the period that an interim earnings announcement is made ranks in the upper portion of the returns surrounding

it. Throughout the year, numerous pieces of information are released which can cause investors to revise their expectations about a firm's riskiness and future returns, and which can, therefore, lead to observed price (or return) changes in the firm's common shares. If a particular type of information (say an interim earnings announcement) is consistently associated with larger than "normal" changes in firms' rates of return, however, one has additional confirming evidence that this type of information is meaningful in setting security prices. A return can, of course, be either positively or negatively "unusually large." Thus, it is the magnitude of the return, regardless of its sign, that is of concern, and for this second set of tests, the absolute values of all returns are used again.

Thus, for *each* announcement, the *rank* of the absolute return of the disclosure period relative to the surrounding absolute returns is determined. For example, if the absolute return for a particular company's earnings announcement period is higher than any of the other absolute returns around that period, it is ranked 1; if it is the second highest, it is ranked 2, and so forth. The rankings of each of the absolute returns associated with the 183 first quarter earnings announcements, 191 semi-annual earnings announcements, and 171 third quarter earnings announcements are then accumulated.

Letting X denote the rank (X = 1, 2, 3, . . . , 14, 15), then $\tilde{X}$ is a discrete random variable following a uniform distribution[23] with an expected value and variance[24] of:

$$E(\tilde{X}) = 1/2(N + 1) = 8$$

$$\mathrm{Var}(\tilde{X}) = \frac{N^2 - 1}{12} = 18\ 2/3$$

where N = number of ranks = 15.

The standard deviation is

$$s(\tilde{X}) = \sqrt{18\ 2/3} = 4.3205.$$

Moreover, the sampling distribution of *mean* ranks follows a

[23] Robert V. Hogg and Allen T. Craig, *Introduction to Mathematical Statistics,* 3rd ed. (New York: Macmillan Publishing, 1970), 349–51.
[24] J. L. Hodges, Jr., and E. L. Lehmann, *Basic Concepts of Probability and Statistics,* 2nd ed. (San Francisco: Holden-Day, 1970), 205.

normal distribution, according to the Central Limit Theorem, and has a standard error[25] of

$$\text{S.E.} = \frac{s(\tilde{X})}{\sqrt{n}}$$

where n = sample size.

If nothing is particularly unusual about a reporting event, the rankings should be evenly distributed, and the mean of the rankings, $\mu$rank, should equal its expected value of *8.000*. If, however, something *is* unusual about the event, the mean rank should be *less than* 8.000 (i.e., the rankings should cluster toward 1). Thus,

$$H_o: \mu\text{rank} \geq 8.000$$
$$H_a: \mu\text{rank} < 8.000$$

The Z statistics and related one-tailed probabilities are reported in Exhibit 5. Once again, the null hypothesis is rejected for all three interim announcements. The results are consistent with the first set of tests.

Exhibit 6 groups the rankings into quartiles, thus showing how often the earnings announcement returns rank in each quartile. (For example, 42 percent of the semiannual earnings announcements are in the top quartile.) This grouping illustrates that the returns associated with interim earnings announcements tend to be quite large relative to the surrounding returns.

### RESEARCH FINDINGS — DATA PARTITIONED BY COUNTRY

The tests just described demonstrate that, in general, the information contained in interim earnings announcements by non–U.S. multinational corporations is impounded in their U.S. share prices.

**Exhibit 5. Z Tests of the Mean Disclosure Period Ranks for the Interim Earnings Announcements**

| | n | Mean rank | Z Value [One-tailed probability] |
|---|---|---|---|
| First quarter | 183 | 6.989 | −3.17 [<.01] |
| Semiannual | 191 | 6.215 | −5.71 [<.01] |
| Third quarter | 171 | 6.772 | −3.72 [<.01] |

[25] George W. Snedecor and William G. Cochran, *Statistical Methods*, 6th ed. (Ames, Iowa: The Iowa State University Press, 1967), 51–53.

**Exhibit 6. Frequency of Quartile Ranks for the Interim Earnings Announcements**

| | First quarter | | Semiannual | | Third quarter | |
|---|---|---|---|---|---|---|
| 1st quartile | 57 | 31% | 80 | 42% | 56 | 33% |
| 2nd quartile | 52 | 29% | 42 | 22% | 49 | 29% |
| 3rd quartile | 39 | 21% | 41 | 21% | 33 | 19% |
| 4th quartile | 35 | 19% | 28 | 15% | 33 | 19% |
| n | 183 | | 191 | | 171 | |

As discussed earlier, further insights into the transnational financial reporting phenomenon can be gained by partitioning the data by the home countries of the firms represented.

Exhibits 7 and 8 include the results of the two sets of tests when the data are partitioned by country. Once again, the two sets of tests yield consistent results. With the exception of the first quarter announcements of Philippine firms, interim announcements of Israeli, Dutch, Philippine, and U.K. firms are associated with unusual U.S. securities price behavior, suggesting that these announcements contain useful information to market participants. The announcements by the Japanese firms appear to be a nonevent. Given the relatively small number of Japanese observations, however, this conclusion is probably best regarded as tentative.

To compare these results to those on annual earnings announcements reported in Meek,[26] the data from that study were also partitioned by country. The results of the *average returns tests* show that the null hypothesis can be rejected for each country at the following probabilities: Israel (<.01), Japan (.19) the Netherlands (.03), the Philippines (>.50), and the United Kingdom (.02). The *rankings tests* reject the null hypothesis for each country at these probabilities: Israel (.07), Japan (.16), the Netherlands (.10), the Philippines (>.50), and the United Kingdom (.01). In general, the annual earnings announcement results seem to be driven by firms from Israel, the Netherlands, and the United Kingdom.

Taking the results for interim and annual earnings announcements together, the conclusion that emerges is that public announcements of accounting earnings by firms from Israel, the Netherlands, and the United Kingdom affect their U.S. share prices. Little evidence of such an impact can found for any of the announcements by Japanese firms. And for Philippine firms, the

26 Meek, "U.S. Securities Market Responses."

**Exhibit 7. Z Tests of the Disclosure Period Mean Absolute Return Values, and Normality Tests of the Mean Absolute Returns Distributions for the Interim Earnings Announcements Partitioned by Country**

| | n | Mean absolute return — disclosure period ($R_0$) | Z value [One-tailed probability] | Shapiro-Wilk W statistic [Probability] |
|---|---|---|---|---|
| First quarter | | | | |
| Israel | 31 | .0510 | 1.61 [.05] | .939 [.44] |
| Japan | 19 | .0228 | −1.30 [>.50] | .921 [.30] |
| The Netherlands | 34 | .0283 | 2.78 [<.01] | .911 [.22] |
| The Philippines | 47 | .0400 | 0.70 [.24] | .952 [.57] |
| The United Kingdom | 52 | .0309 | 2.53 [<.01] | .955 [.62] |
| | 183 | | | |
| Semiannual | | | | |
| Israel | 25 | .0753 | 3.57 [<.01] | .957 [.65] |
| Japan | 27 | .0241 | 0.67 [.25] | .895 [.10] |
| The Netherlands | 34 | .0418 | 6.18 [<.01] | .970 [.83] |
| The Philippines | 43 | .0563 | 2.31 [.01] | .928 [.35] |
| The United Kingdom | 62 | .0467 | 5.08 [<.01] | .955 [.62] |
| | 191 | | | |
| Third quarter | | | | |
| Israel | 28 | .0561 | 1.47 [.07] | .848 [.02] |
| Japan | 18 | .0202 | −1.09 [>.50] | .960 [.69] |
| The Netherlands | 32 | .0324 | 1.93 [.03] | .983 [.97] |
| The Philippines | 46 | .0559 | 2.15 [.02] | .928 [.35] |
| The United Kingdom | 47 | .0401 | 3.58 [<.01] | .947 [.50] |
| | 171 | | | |

**Exhibit 8. Z Tests of the Mean Disclosure Period Ranks for the Interim Earnings Announcements Partitioned by Country**

| | n | Mean rank | Z value [One-tailed probability] |
|---|---|---|---|
| First quarter | | | |
| Israel | 31 | 7.065 | −1.21 [.11] |
| Japan | 19 | 8.579 | 0.58 [>.50] |
| The Netherlands | 34 | 5.706 | −3.10 [<.01] |
| The Philippines | 47 | 7.723 | −0.44 [.33] |
| The United Kingdom | 52 | 6.692 | −2.18 [.01] |
| | 183 | | |
| Semiannual | | | |
| Israel | 25 | 6.000 | −2.31 [.01] |
| Japan | 27 | 8.185 | 0.22 [>.50] |
| The Netherlands | 34 | 5.588 | −3.25 [<.01] |
| The Philippines | 43 | 6.209 | −2.72 [<.01] |
| The United Kingdom | 62 | 5.903 | −3.82 [<.01] |
| | 191 | | |
| Third quarter | | | |
| Israel | 28 | 6.357 | −2.01 [.02] |
| Japan | 18 | 8.833 | 0.82 [>.50] |
| The Netherlands | 32 | 6.656 | −1.76 [.04] |
| The Philippines | 46 | 6.913 | −1.71 [.04] |
| The United Kingdom | 47 | 6.043 | −3.11 [<.01] |
| | 171 | | |

results are mixed — reactions are documented for the semi-annual and third quarter announcements, but not for the first quarter and annual announcements.

## DISCUSSION OF RESULTS

The U.S. securities market impounds the information contained in foreign companies' interim earnings announcements. As a result of this study, we now have closure as to whether both annual and interim announcements of U.S. *and* non–U.S. firms are impounded in U.S. securities prices. Partitioning the data by country suggests that the nationality of the companies may influence this overall result. Specifically, there is little evidence that announcements by Japanese firms affect their U.S. share prices. This is consistent with Deakin, Norwood, and Smith,[27] who find that annual earnings announcements do not affect Japanese firms' share prices at home, either. Reactions to first quarter and annual earnings announcements by Philippine firms are not observed, yet reactions to their semi-annual and third quarter announcements are. Interestingly, the results of the present study conflict with Lev and Yahalomi,[28] who find no reaction to Israeli firms' corporate earnings releases on the Tel Aviv Stock Exchange. The anomaly should be cautiously interpreted, however, since the present study includes only three Israeli firms. In summary, reactions for some countries and non-reactions for others are observed. Nationality may bear upon the usefulness of the interim and annual earnings announcements in transnational financial reporting.

The results of this study imply that financial accounting information does "travel" across national boundaries but that, depending on its country of origin, all such information does not travel equally well. Further research into why annual and interim earnings accouncements appear to be useful to the U.S. securities market in some cases, but not in others, would appear to be important for both accountants and policy makers such as the International Accounting Standards Committee. "Country" proxies for more than just differences in generally accepted accounting principles. For example, variations occur in cultural factors which affect how businesses are managed, and differences exist in how, where, and when accounting information is released in these firms' home countries. Nonetheless, this study provides empirical evidence that the usefulness of accounting information varies in an international

[27] Deakin, Norwood, and Smith, "The Effects of Published Earnings."
[28] Lev and Yahalomi, "The Effect of Corporate Financial Statements."

context. The evidence, in turn, suggests that a basis exists for efforts to enhance the usefulness of the accounting information that is communicated transnationally.

Transnational financial reporting problems have existed for a number of years for both corporations and investors. Only recently have these problems attracted the attention of accounting researchers. Most of the empirical work has studied how corporations, as the suppliers of information, have responded to transnational financial reporting problems. This study has added to our knowledge of the kinds of information found useful by international investors. It is hoped that it will stimulate more research on transnational financial reporting from the perspective of investors and other users.

## APPENDIX. FIRMS INCLUDED IN STUDY

Israel
- Alliance Tire and Rubber Co., Ltd.
- American Israeli Paper Mills Ltd.
- Etz Lavud Ltd.

Japan
- Honda Motor Co., Ltd.
- Kubota, Ltd.
- Matsushita Electric Industrial Co., Ltd.
- Pioneer Electronic Corp.
- Sony Corp.

The Netherlands
- KLM Royal Dutch Airlines
- Royal Dutch Petroleum Co.
- Unilever N.V.

The Philippines
- Atlas Consolidated Mining and Development Corp.
- Benguet Consolidated, Inc.
- Marinduque Mining & Industrial Corp.
- Philippine Long Distance Telephone Co.
- San Carlos Milling Co., Inc.

The United Kingdom
- B.A.T. Industries Ltd.
- British Petroleum Co., Ltd.
- Courtalds Ltd.
- Dunlop Holdings, Ltd.
- EMI Ltd.
- Imperial Chemical Industries, Ltd.
- The Imperial Group Ltd.
- Plessey Co., Ltd.
- "Shell" Transport and Trading Co., Ltd.
- Unilever Ltd.

# *Predicting Business Failure on the Basis of Accounting Data: The Belgian Experience*

HUBERT OOGHE and ERIC VERBAERE*

This paper presents part of the results of a research project on the relationships between the failure of a firm and its financial characteristics, within the Belgian context. The recent economic recession has led to growing worldwide attention to this topic by academicians.[1] The paper is limited to the classification of enterprises (more precise annual accounts) into "failing" or "non-failing" groups on the basis of a set of financial ratios. The results of this classification analysis is then used in a "predictive context." Our primary objective is to construct a practical "predictive" instrument available to the external analyst.[2] Fortunately, the Royal Decree (R.D.) on Annual Accounts of 8 October 1976 provides the researcher with adequate financial information to perform a large-scale analysis.

First, we describe the relevant population and the sampling

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[1] Thirty-five studies in this field are discussed in H. Ooghe, B. Coorevits, and E. Verbaere, "Overzicht van onderzoekingen i.v.m. falingsprevisie," *Bedrijfskunde*, no. 4 (1981), 344–62; no. 1 (1982), 80–96; and no. 2 (1982), 186–92. Empirical research concerning the prediction of corporate failure is surveyed in Zavgren, "The Prediction of Corporate Failure: The State of the Art," *Journal of Accounting Literature*, vol. 2 (1983), 1–38.

[2] The term "predictive" is in quotation marks due to the special sense attached to it in this context.

technique employed. Successively, the selection procedure for the initial variable-set, the statistical technique used, and the results are described. Finally, some general comments and concluding remarks are made.

## RESEARCH DATA — POPULATION AND SAMPLE

The population of the "failing companies" consisted of all firms that became a bankrupt (judgment of the Commercial Court) during the years 1978 to 1980 or obtained a concordat (creditors' agreement) during the same period. The population of the "non-failed" enterprises is formed by all other business firms. The division of companies into one of these two subpopulations presents an artificial character to a certain degree: the two subpopulations are only mutually exclusive within a well-defined time horizon.

Because of the problem of the availability and comparability of data, we considered only those enterprises that were amenable to the R.D. of October 8, 1976, and that were bound to apply the full disclosure requirements (plans 3 or 4) in drafting their annual accounts.[3]

The following primary data sources were available:

1. Computer tapes, distributed by the National Bank of Belgium, containing the numerical data of the annual accounts of all companies publishing according to the royal decree. The available tapes referred to were for the financial years 1977 and 1978.
2. Value added tax (VAT) data of the firms that failed or obtained a concordat during the years 1978 to 1980. These numbers were collected from the trade inquiry agency EURINFORM — Dun and Bradstreet (Brussels).

For classification purposes, we constructed a sample for both the "failing" and the "non-failing" groups. The choice of the sampling design was guided by the objectives of the researchers. As indicated above, our main objective consisted in the construction of a prediction model, applicable to practical situations. The problem is rather complex, however, and will not be discussed in detail

[3] In general, the following enterprises are meant: limited companies, limited partnerships with shares, cooperative companies and private limited companies, which prosecute their main activity in Belgium and which (1) employ, on the average, more than one hundred employees, (2) have a turnover for the previous accounting period, exclusive VAT of more than 100 million BF, (3) have a balance sheet total, at the end of the previous accounting period, of more than 50 million BF, (4) make a public appeal for funds, or (5) are subsidiaries of public companies.

here. Matched sampling is usually preferred in this context. Briefly, the reasoning developed in defense of this technique is as follows. Assuming that there is a relationshp between some characteristics of the firm (such as sector, regio, and size) and its financial ratios,[4] differences in the distribution of these characteristics (features) for the two relevant subpopulations (i.e., "failing" and "non-failing" companies) can bias the results of a classification analysis. Matched sampling is then used to eliminate the effect of these confounding variables. We, however, made use of the random sampling technique. Many arguments can be made in favor of this choice. First, multivariate matching (more than one confounding variable) is difficult to perform. Second, the characteristics mentioned earlier are, according to published statistics,[5] obviously explaining variables for business failures. So these features could be incorporated in one way or another in the classification model. Last, but not least, a sample of "non-failing" firms, constructed on the basis of the specific characteristics of failed firms, was certainly not representative of the population of "non-failing" companies. This could be a problem with our prediction objective in mind.

The two samples for our research were constructed as follows: on the basis of the collected VAT data of the firms that failed or obtained a concordat, all annual accounts for these companies were sought on the magnetic tapes.

The sample for the "non-failing" group was prepared by selecting the annual account of every twentieth firm on the computer tape for the financial year 1977, provided that the firm concerned was not in the "failing" group and was submitted to full disclosure requirements. The annual accounts for the same companies were sought on the computer tape for 1978 and added to the sample. Some more or less incomplete annual accounts were removed from the sample.

By this procedure, 753 annual accounts of "non-failing" companies and 395 annual accounts of "failed" companies could be collected. This last group was subdivided into three categories: (1)

[4] Nearly all empirical studies on this subject concentrate on one single confusing factor. In this case, all other characteristics of the firm should be considered as confusing variables as well. By means of a covariance analysis using dummy-variables regression, we searched for the potential effect of sector, size, regio and condition ("failing" — "non-failing") on the value of many financial ratios considered independently.

[5] H. Ooghe, B. Coorevits, and E. Verbaere, "Omvang en kenmerken van Faillissementen in Belgie," *Tijdschrift voor Bank — en Financiewezen*, vol. 45, no. 2 (1981), 117–45.

one year before bankruptcy: 66 annual accounts; (2) two years before bankruptcy: 214 observations; and (3) three years before bankruptcy: 115 observations.

### SELECTION OF THE INITIAL VARIABLE SET

Management defaults seem to be the main cause of a company's failure. This can be deducted from available statistics.[6] Constant mismanagement leads to a deterioration of the financial situation of the firm. Consequently, financial ratios were used as independent variables in our classification model.

In most previous similar research studies, the selection of the financial ratios was based on the following criteria: (1) the popularity of the individual ratios in the theoretical literature; (2) the importance of the ratios in other research studies; (3) the suggestions made by financial analysts based on their practical experience; and (4) the possibility to calculate certain ratios considering the external available financial data.

Rarely was the final selection process based on the theoretical model incorporating different causes and symptoms of failures. However, an integrated ratiomodel was developed in the research. In this ratiomodel, the liquidity, as well as the profitability, was differentiated into components as far as possible.[7] This model formed the basis of our selection procedure. In addition, a few other general liquidity, profitability, and solvability measures, together with ratios selected on the basis of supplemental theoretical considerations, were included. This resulted in a variable-set of 144 financial ratios. All of them could be calculated from a single annual account.

### STATISTICAL TECHNIQUE: LINEAR DISCRIMINANT ANALYSIS

As indicated in the introduction, our objective was to classify annual accounts into one of the two, *a priori* defined, mutually exclusive groups ("failing" — "non-failing") on the basis of a set of financial ratios (independent variables). This can be accomplished by using discriminant analysis.[8] Discriminant analysis is the general term for a set of multivariate statistical techniques leading, first,

[6] For example, the statistics compiled by CEDRE (Belgium).

[7] H. Ooghe, B. Coorevits, and E. Verbaere, "Theoretisch model voor selectie van financiele ratio's ter voorspelling van faillissementen," *Seminarie voor Bedrijfsfinanciering* (1981).

[8] P. Lachenbruch, *Discriminant Analysis* (New York: Hafner Press, 1975); H. Nie et al., *Statistical Package for the Social Sciences,* 2nd ed. (New York: McGraw-Hill, 1975), 434–66.

to determine the variables discriminating as good as possible between two or more *a priori* defined groups, and, second, to classify observations into one of these groups. According to our research problem, we considered only the two-groups case. The most popular and readily understandable discriminant technique designed for interval-scaled independent variables is linear discriminant analysis.[9] This technique is discussed and employed in this article.

The general form of the linear discriminant model with m independent variables can be written as coefficients

$$Y_i = \alpha + \beta_1 X_{1i} + \beta_2 X_{2i} + \ldots + \beta_m X_{mi}$$

whereby: $i = 1, \ldots, N$ (N = number of observations),
$x_1$ up to $X_m$ are the independent variables,
$\alpha$ and the $\beta$'s are the (unstandardized) discriminant coefficients
($\alpha$ is called the constant term),
$Y_i$ is called the discriminant score for observation i.

The different coefficients can be estimated statistically[10] so that a discriminant score can be obtained for each observation of the sample. Classification will be achieved as follows: classify observation i in the "non-failing" group if its discriminant score $Y_i$ exceeds or equals some prespecified critical value $Y_{crit}$. The observation is placed in the "failing" group if the score $Y_i$ is less than $Y_{crit}$.

The global discriminating power of an estimated function can, from a statistical point of view, be judged using significance measures like Hotellings $T^2$ and Wilks's lambda. The null hypothesis for both test statistics states that the two groups are equal with respect to the means of the independent variables. Hotellings $T^2$, which can be derived directly from Mahalanobis $D^2$ (an adjusted distance measure in the multidimensional space), is transformable to an F-statistic with m degrees of freedom (d.f.) in the numerator and $N - n - 1$ degrees of freedom in the denominator. Wilk's lambda is the more general inverse statistic (also applicable in the case of three or more groups) transformable to a Chi-square measure (Bartlett V with m d.f. in the case of two groups) or an F-statistic (Rao's Ra − F-distributed with m and $N - m - 1$ degrees

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[9] Our research achieved classification through three different discriminant models: linear, quadratic, and logitmodel.

[10] The different coefficients are a function of a set of parameters, namely, the means, the variances of the various independent variables, and the covariances between these variables. The SPSS — subprogram "DISCRIMINANT" and software, developed at the department, was used.

of freedom in the two-groups case). In many cases, the full set of independent variables, which is the input for the discriminant analysis, contains redundant information of the group differences, or some of the initial input variables are perhaps not very useful in discriminating among the "failing" and "non-failing" group. For that reason, a stepwise selection method is used. By sequentially selecting at each step the "next best" discriminator (evaluating the discriminating power of a variable after considering the discrimination acheived by the other previous selected variables), a reduced set of variables will possibly be found, which is almost as good as, sometimes even better than, the full set. Note that previously selected variables may be excluded because the information that they contain is available in some combinations of the other included variables.

An important problem is the measurement of the relative importance of the different discriminating variables. If the independent variables are intercorrelated, no clear-cut solution to the problem exists. Five different methods will be proposed in this test. First, the absolute value of the standardized discriminant coefficient gives an indication concerning the relative importance of the financial ratios. The unstandardized coefficients cannot be used in this context because of differences in unit and variance of their respective associated variables. A second approach consists in the calculation for each variable of its structure correlation (i.e., the Pearson correlation coefficient between the discriminant score and the concerned variable). The higher the positive or negative correlation, the more important the predictor is considered to be. The order in which the independent variables are selected by the stepwise selection process can also be used in this context. The Mosteller and Wallace test allows the researcher to estimate the relative contribution of each variable to the Mahalanobis distance between the points for both groups in the multidimensional space, defined by the means of the different variables. Currently used also is the partial multivariate F-ratio: this F-ratio measures the discrimination introduced by the variable, after taking into account the discrimination achieved by all the other selected variables.

We have already mentioned Hotellings $T^2$ and Wilk's lambda as statistical measures of the discriminating power of an estimated discriminant model. However, one can develop a more intuitive measure for judging the performance of a classification model. It is obvious that not all of the "failing" or "non-failing" annual accounts in the sample are classified by the discriminant model in

the "failing" respectively "non-failing" group. The percentage of incorrectly classified observations within each subsample gives an indication of the reliability of the developed model (sample method). Because the same observations are used in the classification test and in the estimation of the model's parameters, the classification results obtained by the sample method can be expected to be upward biased. This bias can, for the most part, however, be eliminated by using the Lachenbruch method in judging the model's performance: one observation is isolated from the sample as the hold-out annual account, with the remaining sample determining the model. In this case, the omitted observation is classified according to this model. This process is repeated until the entire sample is exhausted (in principle, a discriminant model is estimated as many times as there are observations in the global sample) and the classification accuracy of the hold-out firms is cumulated.

From the formulation of the classification rule, it follows that a decline in the critical value leads to an increase of the misclassification percentage with the "failing" sample and to a decrease of the number of observations incorrectly classified within the "non-failing" sample. A shift in the critical value in the function of the objectives of the user is consequently possible. The optimal critical value is defined as the limit value for which the unweighted mean of the classification percentages for the two groups is minimal. The practical and theoretical significance of this specific critical value is rather limited.

## RESULTS

Four different models will be presented here: (1) discriminant model: one year before bankruptcy; (2) discriminant model: two years before bankruptcy; (3) discriminant model: three years before bankruptcy; and (4) discriminant model for the global sample.

It is clear that not all of the 144 financial ratios were used as input variables for the stepwise discriminant program.

A reduction of the data set was implemented in several ways. First, the results of several preceding statistical analyses were used to build a set of input variables. The following analyses were performed:

1. Univariate analysis: the 144 financial ratios are examined one by one, without paying attention to the intercorrelations among them.
   A. A research into the distributional characteristics of the different variables: the main conclusion is that non-normality is the general rule.

**Exhibit 1. One Year Before Failure — Original Model**

| Order | Number (see appendix) | Unstandardized coefficient | Standardized coefficient | Relative importance of the ratios according to the following criteria: Structure correlation (a) | | Stepwise procedure | Mosteller Wallace (%) (b) | | Partial multivariate F-value (c) | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 62 | −48.7487 | −0.6963 | 1 | (−0.77) | 1 | 1 | (46.73) | 1 | (151.36) |
| 2 | 135 | 8.3096 | 0.3526 | 2 | (0.67) | 2 | 2 | (22.25) | 3 | (20.68) |
| 3 | 36 | 4.8323 | 0.2692 | 4 | (0.42) | 3 | 3 | (9.26) | 2 | (24.03) |
| 4 | 35 | 2.5098 | 0.2097 | 5 | (0.39) | 4 | 4 | (6.64) | 5 | (4.73) |
| 5 | 143 | 4.6491 | 0.1562 | 10 | (0.09) | 8 | 10 | (1.16) | 4 | (5.77) |
| 6 | 111 | 0.0404 | 0.1545 | 16 | (0.00) | 6 | 15 | (0.01) | 6 | (4.65) |
| 7 | 113 | 2.7523 | 0.1323 | 8 | (0.21) | 5 | 6 | (2.40) | 9 | (3.59) |
| 8 | 57 | −1.7923 | −0.1258 | 7 | (−0.22) | 9 | 7 | (2.12) | 8 | (3.75) |
| 9 | 122 | −0.0994 | −0.1136 | 15 | (0.01) | 12 | 16 | (−0.16) | 7 | (4.49) |
| 10 | 129 | −1.3388 | −0.1118 | 9 | (−0.19) | 11 | 8 | (1.83) | 13 | (1.64) |
| 11 | 69 | −1.2152 | −0.1021 | 13 | (−0.03) | 7 | 13 | (0.28) | 10 | (2.89) |
| 12 | 146 | 1.3907 | 0.0955 | 3 | (0.59) | 16 | 5 | (4.96) | 16 | (1.02) |
| 13 | 67 | −1.4047 | −0.0947 | 6 | (−0.24) | 10 | 9 | (1.72) | 11 | (2.80) |
| 14 | 87 | 0.0032 | 0.0760 | 14 | (0.02) | 13 | 14 | (0.15) | 12 | (1.73) |
| 15 | 103 | 0.0035 | 0.0728 | 12 | (0.05) | 14 | 12 | (0.31) | 14 | (1.49) |
| 16 | 58 | 0.0023 | 0.0600 | 11 | (0.07) | 15 | 11 | (0.34) | 15 | (1.02) |
| constant term | | 3.1280 | | | | | | | | |

(a) The Pearson correlation coefficients are in parentheses.
(b) The procentual contribution of the variable to Mahalanobis distance is in parentheses. This contribution can possibly be negative.
(c) The partial multivariate F-values are in parentheses.

Mahalanobis $D^2$: 8.0598
Hotellings $T^2$: 486.233
deducted F-value: 29.7944 (F-distributed with 16 and 751 d.f.)
Wilk's lambda: 0.6157
Rao's Ra: 29.2969 (F-distributed with 16 and 751 d.f.)
Barlett V: 367.6265 (approximated by Chi-square with 16 d.f.)

Classification results

| Critical value (discriminant score) | Misclassification (%) "non-failed" sample | Misclassification (%) "failed" sample |
|---|---|---|
| −11.0594 | 0.00 | 83.33 |
| 0.0000 | 4.70 | 25.76 |
| 1.3809 (optimal) | 7.83 | 12.12 |
| 1.9051(optimal) | 9.97 | 10.61 |
| 2.9844 | 22.93 | 4.55 |
| 4.4706 | 57.55 | 0.00 |
| 0.0000 (Lachenbruch) | 10.11 | 13.64 |

**Exhibit 2. One Year before Failure — Reduced Model**

| | | | | Relative importance of the ratios according to the following criteria | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Order | Number (see appendix) | Unstandardized coefficient | Standardized coefficient | Structure correlation (a) | | Stepwise procedure | Mosteller Wallace (%) (b) | | Partial multivariate F-value (c) | |
| 1 | 62 | −51.3394 | −0.7216 | 1 | (−0.80) | 1 | 1 | (53.46) | 1 | (184.36) |
| 2 | 135 | 10.0870 | 0.4841 | 2 | (0.68) | 2 | 2 | (29.02) | 2 | (67.48) |
| 3 | 36 | 4.4145 | 0.2539 | 3 | (0.41) | 3 | 3 | (8.81) | 3 | (18.52) |
| 4 | 35 | 2.0318 | 0.1843 | 4 | (0.37) | 4 | 4 | (5.74) | 4 | (9.36) |
| 5 | 113 | 2.6314 | 0.1664 | 5 | (0.22) | 5 | 5 | (2.97) | 5 | (8.06) |
| constant term | | 2.6803 | | | | | | | | |

(a) The Pearson correlation coefficients are in parentheses.
(b) The procentual contribution of the variable to Mahalanobis distance is in parentheses. This contribution can possibly be negative.
(c) The partial multivariate F-values are in parentheses.
Mahalanobis $D^2$: 7.4559 — Hotellings $T^2$: 452.3853 (deducted F-value: 75.0279 — F-distributed with 5 and 812 d.f.)
Wilk's lambda: 0.6433 — Rao's Ra: 90.032 (F-distributed with 5 and 812 d.f.)
— Bartlett V: 358.8201 (approximated by Chi-square with 5 d.f.)

Classification results

| Critical value (discriminant score) | Misclassification (%) "non-failed" sample | Misclassification (%) "failed" sample |
|---|---|---|
| −11.9339 | 0.0 | 87.88 |
| 0.0000 | 4.52 | 30.30 |
| 1.4970 (optimal) | 6.91 | 15.15 |
| 2.4881 | 12.10 | 12.12 |
| 3.6518 | 41.62 | 4.55 |
| 3.9566 | 51.06 | 0.00 |
| 0.0000 (Lachenbruch) | 4.65 | 27.27 |

B. Significance tests for the differences between "failing" and "non-failing" firms: parametric tests, which are based on the normality assumption (e.g., the t-test); and non-parametric tests: Mann-Whitney, Kolmogorov-Smirnov, Median test.

C. Univariate classification test: for each ratio, the misclassification percentages for each group were obtained by comparing the ratio values for the individual observations with a specified critical value. An optimal critical value can be determined again.

D. A covariance-analysis using dummy-variable regression was performed for the different financial ratios to detect the potential effect of sector, size, region, and condition on the value of the ratio ("failing" — "non-failing").[11]

E. Visual inspection of the graphs of the relative cumulative frequency for both the "failing" and the "non-failing" groups.

2. Multivariate analysis: the ratios were simultaneously analyzed in combination with each other:

A. Factor analysis: this statistical technique is designed to investigate the nature of the relationships between variables in a specified set.

b. A.I.D. analysis: with the help of this technique, certain types of interaction effects among the various variables were detected.[12]

If the Pearson correlation coefficient between two variables was more than 0,80 in absolute value, the less discriminating financial ratio in an univariate context was omitted.

Because the missing values problem in the discriminant analysis was handled by listwise deletion of observations (each observation with at least one missing variable was deleted), high demands were made upon the possibility to calculate a specific financial ratio (e.g., the denominator in the ratio "debts for which the payment date has fallen due to the tax administration and/or the National Social Security Office ÷ debts and provisions for taxation, social security, and wages" often takes the value 0.)

From the resulting set of variables, the "best" linear discriminant model (original model) was prepared by a trial-and-error process and employing the stepwise discriminant program.

The choice of the "best" discriminant model was based on the classification results, as well as on the number of observations in

[11] The interaction terms were also specified.

[12] These statistical techniques are discussed in Nie et al., *Statistical Package*; J. Sonquist, E. Baker, and J. Morgan, *Searching for Structure* (Ann Arbor, Mich.: Institute of Social Research, University of Michigan, 1975).

**Exhibit 3. Two Years before Bankruptcy — Original Model**

| Order | Number (see appendix) | Unstandardized coefficient | Standardized coefficient | Relative importance of the ratios according to the following criteria: Structure correlation (a) | Stepwise procedure | Mosteller Wallace (%) (b) | Partial multivariate F-value (c) |
|---|---|---|---|---|---|---|---|
| 1 | 62 | −15.4523 | −0.4595 | 2 (−0.56) | 2 | 1 (22.58) | 1 (59.46) |
| 2 | 146 | 2.6660 | 0.3086 | 1 (0.66) | 1 | 2 (19.04) | 4 (11.67) |
| 3 | 35 | 1.8136 | 0.2679 | 3 (0.50) | 12 | 3 (10.89) | 7 (8.25) |
| 4 | 67 | −2.0798 | −0.2570 | 4 (−0.42) | 4 | 4 (9.07) | 2 (14.43) |
| 5 | 113 | 2.7340 | 0.2561 | 5 (0.39) | 3 | 5 (8.68) | 3 (14.15) |
| 6 | 68 | 1.1247 | 0.2037 | 14 (0.25) | 14 | 7 (4.22) | 8 (6.13) |
| 7 | 12 | 0.1384 | 0.1963 | 22 (0.03) | 6 | 19 (0.42) | 5 (8.95) |
| 8 | 137 | 0.0873 | 0.1896 | 18 (0.13) | 5 | 13 (2.05) | 6 (8.79) |
| 9 | 114 | 1.1070 | 0.1589 | 16 (−0.19) | 15 | 22 (−2.53) | 18 (3.29) |
| 10 | 22 | −0.7287 | −0.1551 | 10 (−0.30) | 16 | 8 (4.05) | 9 (5.58) |
| 11 | 90 | 1.9947 | 0.1511 | 7 (0.35) | 11 | 6 (4.45) | 10 (5.25) |
| 12 | 79 | −0.6368 | −0.1455 | 9 (−0.31) | 10 | 10 (3.59) | 11 (5.12) |
| 13 | 131 | −0.8588 | −0.1455 | 13 (0.26) | 21 | 23 (−3.04) | 20 (2.12) |
| 14 | 50 | −0.1195 | −0.1381 | 20 (−0.07) | 9 | 18 (0.86) | 11 (5.13) |
| 15 | 83 | −0.3748 | −0.1350 | 6 (−0.38) | 7 | 9 (3.71) | 16 (3.56) |
| 16 | 73 | −2.3594 | −0.1268 | 11 (−0.29) | 13 | 11 (3.07) | 15 (3.96) |
| 17 | 37 | 0.2502 | 0.1255 | 15 (0.22) | 18 | 12 (2.23) | 14 (4.19) |
| 18 | 84 | −0.0045 | −0.1253 | 17 (−0.17) | 8 | 16 (1.73) | 13 (4.31) |
| 19 | 122 | −0.0413 | −0.1210 | 21 (−0.03) | 17 | 20 (0.34) | 17 (3.46) |
| 20 | 111 | −0.0041 | −0.1018 | 19 (−0.11) | 19 | 17 (0.92) | 19 (2.79) |
| 21 | 57 | −0.6050 | −0.0862 | 12 (−0.28) | 20 | 14 (1.79) | 21 (1.67) |
| 22 | 47 | −3.2237 | −0.0726 | 8 (−0.31) | 23 | 15 (1.74) | 23 (1.15) |
| 23 | 103 | 0.0021 | 0.0701 | 23 (0.02) | 22 | 21 (0.15) | 22 (1.31) |
| constant term | | 0.3598 | | | | | |

(a) The Pearson correlation coefficients are in parentheses.
(b) The procentual contribution of the variable to Mahalanobis distance is in parentheses. This contribution can possibly be negative.
(c) The partial multivariate F-values are in parentheses.

Mahalanobis $D^2$: 2.5516
Hotellings $T^2$: 405.7185
deducted F-value: 17.2092 (F-distributed with 23 and 879 d.f.)
Wilk's lambda: 0.6884
Rao's Ra: 17.2988 (F-distributed with 23 and 879 d.f.)
Bartlett V: 332.1261 (approximated by Chi-square with 23 d.f.)

Classification results

| Critical value (discriminant score) | Misclassification (%) "non-failed" sample | Misclassification (%) "failed" sample |
|---|---|---|
| −5.1463 | 0.00 | 94.17 |
| −1.0007 | 5.02 | 51.94 |
| −0.3993 | 10.19 | 38.35 |
| 0.0000 | 15.35 | 27.18 |
| 0.1246 (optimal) | 17.50 | 23.30 |
| 0.2455 | 19.80 | 21.36 |
| 0.5020 | 26.97 | 15.53 |
| 0.7381 | 34.86 | 9.71 |
| 1.1438 | 47.20 | 4.85 |
| 3.2701 | 92.68 | 0.00 |
| 0.0000 (Lachenbruch) | 26.97 | 15.53 |

**Exhibit 4. Two Years before Failure — Reduced Model**

| | | | | Relative importance of the ratios according to the following criteria | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Order | Number (see appendix) | Unstandardized coefficient | Standardized coefficient | Structure correlation (a) | | Stepwise procedure | Mosteller Wallace (%) (b) | | Partial multivariate F-value (c) | | |
| 1 | 146 | 4.6524 | 0.6317 | 1 | (0.71) | 1 | 1 | (42.74) | 1 | (102.49) | |
| 2 | 62 | −16.5456 | −0.5568 | 2 | (−0.63) | 2 | 2 | (31.77) | 2 | (77.24) | |
| 3 | 113 | 3.2732 | 0.3541 | 4 | (0.42) | 3 | 3 | (13.40) | 3 | (28.28) | |
| 4 | 67 | −1.7381 | −0.2562 | 3 | (−0.46) | 4 | 4 | (9.81) | 4 | (14.80) | |
| 5 | 137 | 0.0738 | 0.1836 | 5 | (0.14) | 5 | 5 | (2.29) | 5 | (7.66) | |
| constant term | | 0.1837 | | | | | | | | | |

(a) The Pearson correlation coefficients are in parentheses.
(b) The procentual contribution of the variable to Mahalanobis distance is in parentheses. This contribution can possibly be negative.
(c) The partial multivariate F-values are in parentheses.
Mahalanobis $D^2$: 1.9439 — Hotellings $T^2$: 313.2072 (deducted F-value: 62.3726 — F-distributed with 5 and 928 d.f.)
Wilk's lambda: 0.75065 — Rao's Ra: 61.6523 (F-distributed with 5 and 928 d.f.)
— Bartlett V: 266.59 (approximated by Chi-square with 5 d.f.)

Classification results

| Critical value (discriminant score) | Misclassification (%) "non-failed" sample | Misclassification (%) "failed" sample |
|---|---|---|
| −4.4515 | 0.00 | 95.17 |
| −0.9932 | 4.81 | 61.84 |
| −0.3926 | 9.90 | 43.96 |
| 0.0000 | 15.13 | 31.88 |
| 0.2350 | 22.28 | 23.19 |
| 0.4032 (optimal) | 29.44 | 14.49 |
| 0.6216 | 38.93 | 9.66 |
| 0.8608 | 49.24 | 4.83 |
| 3.2565 | 96.29 | 0.00 |
| 0.0000 (Lachenbruch) | 14.99 | 31.88 |

the resulting sample. At first sight, we had to search to minimize the misclassification percentages and to maximize the number of observations because of the broad applicability of the model. However, a more differentiated approach seemed necessary. Listwise deletion had negative as well as positive consequences. For example, inclusion of the ratio "pension fund/long-term debt" led to exclusion of all firms which had no long-term debt. Thus, the general character of certain general financial ratios led to the elimination of incomplete and/or incorrect annual accounts at the same time (positive aspect).

For application in a practical situation, the greater number of variables in the "best" linear discriminant model can cause difficulties. For this reason, reduced models should be developed. The number of financial ratios in these reduced models was arbitrarily fixed at 5. Clearly, this reduction led to a decline in the reliability of the model.

The results of the analysis are presented here in the following order: Exhibit 1 — one year before bankruptcy — original model; Exhibit 2 — one year before bankruptcy — reduced model; Exhibit 3 — two years before bankruptcy — original model; Exhibit 4 — two years before bankruptcy — reduced model; Exhibit 5 — three years before bankruptcy — original model; Exhibit 6 — three years before bankruptcy — reduced model; Exhibit 7 — total sample — original model; Exhibit 8 — total sample — reduced model.

In Exhibits 1 through 8, the unstandardized and standardized discriminant coefficients for the different ratios are shown. The financial ratios are arranged in decreasing order of importance, judged on the basis of the standardized coefficients. In addition, the ranking of the variables corresponding to the other criteira (structure correlations, stepwise selection procedure, Mosteller and Wallace, partial multivariate F-value) is reported. The classification results for different critical values are mentioned. The presentation of several critical values is important from a practical point of view. The user of the model gets an idea of distribution of the discriminant scores for both the "failing" and the "non-failing" sample. He can choose the relevant critical value considering the problem at hand. Considerations about the relative cost of misclassifications in both groups may be important in this context. The various statistical significance measures are also reproduced in the tables. All financial ratios are calculated in decimal form.

As could be expected, the discriminating power of a model

**Exhibit 5. Three Years before Failure — Original Model**

| Order | Number (see appendix) | Unstandardized coefficient | Standardized coefficient | Relative importance of the ratios according to the following criteria: Structure correlation (a) | Stepwise procedure | Mosteller Wallace (%) (b) | Partial multivariate F-value (c) |
|---|---|---|---|---|---|---|---|
| 1 | 62 | −18.0393 | −0.5110 | 2 (−0.55) | 2 | 1 (26.01) | 1 (35.83) |
| 2 | 146 | 2.7931 | 0.3914 | 1 (0.58) | 1 | 2 (22.50) | 3 (10.61) |
| 3 | 67 | −2.4363 | −0.3538 | 3 (−0.47) | 3 | 3 (15.08) | 2 (14.43) |
| 4 | 124 | 0.0619 | 0.2204 | 9 (0.23) | 5 | 7 (4.54) | 4 (6.48) |
| 5 | 69 | −1.1838 | −0.2114 | 17 (−0.03) | 11 | 15 (0.51) | 5 (4.58) |
| 6 | 113 | 1.7377 | 0.2031 | 6 (0.35) | 4 | 5 (6.51) | 6 (3.99) |
| 7 | 131 | −0.9436 | −0.1930 | 16 (0.10) | 7 | 17 (−1.63) | 9 (3.69) |
| 8 | 9 | 0.0209 | 0.1882 | 15 (0.12) | 10 | 11 (2.06) | 7 (3.94) |
| 9 | 90 | 2.3116 | 0.1804 | 5 (0.39) | 6 | 4 (6.73) | 8 (3.89) |
| 10 | 35 | 0.8764 | 0.1635 | 4 (0.43) | 17 | 6 (6.13) | 12 (1.85) |
| 11 | 89 | 0.0537 | 0.1467 | 12 (0.18) | 9 | 10 (2.37) | 10 (2.82) |
| 12 | 57 | −0.8242 | −0.1364 | 8 (−0.23) | 8 | 9 (2.78) | 11 (2.00) |
| 13 | 93 | 0.0351 | 0.1208 | 13 (0.16) | 14 | 13 (1.74) | 14 (1.81) |
| 14 | 109 | 0.0031 | 0.1178 | 14 (0.13) | 13 | 14 (1.32) | 13 (1.84) |
| 15 | 79 | −0.4514 | −0.1175 | 11 (−0.19) | 15 | 12 (2.03) | 15 (1.72) |
| 16 | 15 | −0.8080 | −0.1169 | 7 (−0.30) | 12 | 8 (3.22) | 16 (1.42) |
| 17 | 83 | 0.3016 | 0.1117 | 10 (−0.21) | 18 | 18 (−2.09) | 18 (1.05) |
| 18 | 111 | 0.0080 | 0.1061 | 18 (0.01) | 16 | 16 (0.14) | 17 (1.40) |
| constant term | | 1.4069 | | | | | |

(a) The Pearson correlation coefficients are in parentheses.
(b) The procentual contribution of the variable to Mahalanobis distance is in parentheses. This contribution can possibly be negative.
(c) The partial multivariate F-values are in parentheses.
Mahalanobis $D^2$: 1.8000
Hotellings $T^2$: 170.3717
deducted F-value: 9.2703 (F-distributed with 19 and 809 d.f.)
Wilk's lambda: 0.8321
Rao's Ra: 9.0688 (F-distribution with 19 and 809 d.f.)
Bartlett V: 150.1668 (approximated by Chi-square with 18 d.f.)

Classification results

| Critical value (discriminant score) | Misclassification (%) "non-failed" sample | Misclassification (%) "failed" sample |
|---|---|---|
| −5.3575 | 0.00 | 96.33 |
| −1.1813 | 4.73 | 66.97 |
| −0.4831 | 10.01 | 52.29 |
| 0.0000 | 16.97 | 34.86 |
| 0.2901 | 26.15 | 24.77 |
| 0.5466 (optimal) | 34.35 | 12.84 |
| 0.6340 | 38.25 | 10.09 |
| 1.0673 | 56.75 | 4.59 |
| 3.0952 | 96.24 | 0.00 |
| 0.0000 (Lachenbruch) | 27.96 | 20.18 |

**Exhibit 6. Three Years before Bankruptcy — Reduced Model**

| Order | Number (see appendix) | Unstandardized coefficient | Standardized coefficient | Relative importance of the ratios according to the following criteria: Structure correlation (a) | | Stepwise procedure | Mosteller Wallace (%) (b) | | Partial multivariate F-value (c) | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 62 | −18.3474 | −0.5805 | 1 | (−0.63) | 1 | 1 | (34.55) | 1 | (41.03) |
| 2 | 146 | 3.3847 | 0.5564 | 2 | (0.62) | 2 | 2 | (33.65) | 2 | (37.76) |
| 3 | 113 | 2.3601 | 0.3146 | 4 | (0.38) | 4 | 4 | (11.32) | 3 | (11.35) |
| 4 | 67 | −1.9230 | −0.3144 | 3 | (−0.51) | 3 | 3 | (14.93) | 4 | (11.12) |
| 5 | 124 | 0.0617 | 0.2416 | 5 | (0.25) | 5 | 5 | (5.55) | 5 | (6.92) |
| constant term | | 0.2153 | | | | | | | | |

(a) The Pearson correlation coefficients are in parentheses.
(b) The procentual contribution of the variable to Mahalanobis distance is in parentheses. This contribution can possibly be negative.
(c) The partial multivariate F-values are in parentheses.
Mahalanobis $D^2$: 1.4067 — Hotellings $T^2$: 140.1886 (deducted F-value: 27.9073 — F-distributed with 5 and 856 d.f.)
Wilk's lambda: 0.8627 — Rao's Ta: 27.25 (F-distributed with 5 and 1131 d.f.)
— Bartlett V: 364.037 (approximated Chi-square with 5 d.f.)

Classification results

| Critical value (discriminant score) | Misclassification (%) "non-failed" sample | Misclassification (%) "failed" sample |
|---|---|---|
| −4.9333 | 0.00 | 97.39 |
| −1.1052 | 5.09 | 73.04 |
| −0.5076 | 9.91 | 61.74 |
| 0.0000 | 15.80 | 46.96 |
| 0.3555 | 29.85 | 28.70 |
| 0.6085 (optimal) | 45.65 | 9.57 |
| 0.8950 | 59.97 | 4.35 |
| 2.4592 | 95.85 | 0.00 |
| 0.0000 (Lachenbruch) | 16.20 | 43.48 |

increases as the period between the financial year and the year of failure decreases. This can be concluded from the statistical significance measures (Hotellings $T^2$, Wilk's lambda, and derived statistics), as well as from the practical classification results. The financial ratios in the distinct models differ partly from year to year. For the three reduced models (one, two, and three years before failure), nine different financial ratios are used. Major differences can be found in the original models for the less important discriminators.

The performance of the reduced model is always slightly lower than the performance of the corresponding original model. Because the reduced model seems quite appropriate for classification purposes ("prediction") in a practical situation, the full original model can be used in an analytical context (description of the failure process).

It seems rather strange that several financial ratios have a negative contribution to Mahalanobis distance, according to the Mosteller and Wallace tests. This result is consistent with the fact that, despite a positive (negative) correlation between ratio and discriminant score, a negative (positive) discriminant coefficient is found for the variable concerned. Exclusion of these ratios, selected by the stepwise process, does not lead to better classification results. An explanation should be sought in the multivariate character of the discriminant technique.

The results of the Lachenbruch procedure indicate that there is only a slight bias (if any) in the classification results based on the sample method. The different ranking criteria for the individual variables yield almost the same results as long as the number of variables (the intercorrelations between the ratios) is small (i.e., for the reduced models).

Incorporation of more variables leads to greater differences between the ranking methods, certainly for the less important discriminators. For each model, the Spearman rank-order correlation coefficient was computed between each pair of rankings. These computations show that the rankings based on the standardized coefficients and the partial multivariate F-value are rather similar.

The application of a classification model for predictive purposes entails many primarily conceptual problems. Only a few remarks are made here. The predictive aspect of our study was considered important. It was one of the main reasons why a non-paired or representative sampling technique was used. The bias in other

**Exhibit 7. Total Sample — Original Model**

| Order | Number (see appendix) | Unstandardized coefficient | Standardized coefficient | Relative importance of the ratios according to the following criteria: Structure correlation (a) | | Stepwise procedure | Mosteller Wallace (%) (b) | | Partial multivariate F-value (c) | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 86 | 1.8660 | 0.4356 | 6 | (0.36) | 8 | 5 | (12.56) | 4 | (26.26) |
| 2 | 62 | −10.5401 | −0.4314 | 3 | (−0.55) | 2 | 2 | (19.92) | 1 | (64.44) |
| 3 | 113 | 4.9926 | 0.4214 | 5 | (0.41) | 3 | 4 | (14.58) | 3 | (36.69) |
| 4 | 35 | 2.3661 | 0.3658 | 2 | (0.57) | 6 | 3 | (16.76) | 5 | (17.98) |
| 5 | 67 | −2.4969 | −0.3508 | 4 | (−0.45) | 4 | 6 | (12.55) | 2 | (37.08) |
| 6 | 116 | −1.9108 | −0.3466 | 8 | (0.30) | 9 | 20 | (−8.87) | 8 | (13.67) |
| 7 | 122 | −0.1646 | −0.3106 | 20 | (−0.00) | 10 | 16 | (0.08) | 9 | (11.36) |
| 8 | 146 | 2.7680 | 0.2948 | 1 | (0.73) | 1 | 1 | (23.67) | 7 | (14.17) |
| 9 | 69 | −1.8517 | −0.2666 | 16 | (−0.04) | 7 | 12 | (0.88) | 6 | (17.78) |
| 10 | 129 | −1.4122 | −0.2257 | 11 | (−0.16) | 16 | 8 | (3.09) | 11 | (7.61) |
| 11 | 57 | −1.3978 | −0.1940 | 7 | (−0.35) | 5 | 7 | (5.18) | 10 | (9.35) |
| 12 | 121 | 0.0825 | 0.1716 | 18 | (0.02) | 11 | 14 | (0.33) | 15 | (3.50) |
| 13 | 114 | 1.2402 | 0.1644 | 9 | (−0.24) | 17 | 19 | (−3.46) | 13 | (4.72) |
| 14 | 143 | 2.4065 | 0.1386 | 12 | (0.13) | 13. | 9 | (1.47) | 12 | (5.78) |
| 15 | 89 | 0.0395 | 0.1117 | 14 | (0.11) | 12 | 10 | (0.96) | 14 | (3.94) |
| 16 | 93 | 0.0274 | 0.0951 | 13 | (0.11) | 18 | 11 | (0.95) | 16 | (2.81) |
| 17 | 50 | −0.0814 | −0.0897 | 19 | (−0.02) | 15 | 15 | (0.16) | 17 | (2.75) |
| 18 | 59 | −0.4576 | −0.0843 | 10 | (0.19) | 20 | 18 | (−1.22) | 20 | (1.57) |
| 19 | 58 | −0.0017 | −0.0827 | 17 | (0.04) | 19 | 17 | (−0.27) | 19 | (2.12) |
| 20 | 84 | −0.0028 | −0.0811 | 15 | (−0.10) | 14 | 13 | (0.66) | 18 | (2.28) |
| constant term | | 0.4608 | | | | | | | | |

(a) The Pearson correlation coefficients are in parentheses.
(b) The procentual contribution of the variable to Mahalanobis distance is in parentheses. This contribution can possibly be negative.
(c) The partial multivariate F-values are in parentheses.

Mahalanobis $D^2$: 2.2352
Hotellings $T^2$: 543.7182
deducted F-value: 26.700 (F-distributed with 20 and 1044 d.f.)
Wilk's lambda: 0.6695
Rao's Ra: 25.7686 (F-distribution with 20 and 1044 d.f.)
Bartlett V: 422.49 (approximated by Chi-square with 20 d.f.)

Classification results

| Critical value (discriminant score) | Misclassification (%) "non-failed" sample | Misclassification (%) "failed" sample |
|---|---|---|
| −3.7661 | 0.00 | 92.82 |
| −1.1467 | 5.22 | 57.11 |
| −0.4889 | 10.01 | 38.03 |
| 0.0000 | 18.87 | 25.53 |
| 0.1825 | 21.92 | 21.81 |
| 0.3783 (optimal) | 27.14 | 15.43 |
| 0.6666 | 36.87 | 9.84 |
| 1.2058 | 54.43 | 5.05 |
| 3.5630 | 96.37 | 0.00 |
| 0.0000(Lachenbruch) | 29.32 | 19.95 |

**Exhibit 8. Total Sample — Reduced Model**

| | | | | Relative importance of the ratios according to the following criteria | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Order | Number (see appendix) | Unstandardized coefficient | Standardized coefficient | Structure correlation (a) | | Stepwise procedure | Mosteller Wallace (%) (b) | | Partial multivariate F-value (c) | |
| 1 | 146 | 4.3178 | 0.6134 | 1 | (0.76) | 1 | 1 | (45.38) | 1 | (125.29) |
| 2 | 62 | −11.6782 | −0.5085 | 2 | (−0.61) | 2 | 2 | (27.24) | 2 | (85.05) |
| 3 | 113 | 3.1676 | 0.3417 | 4 | (0.46) | 3 | 3 | (13.78) | 3 | (36.03) |
| 4 | 67 | −1.6200 | −0.2635 | 3 | (−0.47) | 4 | 4 | (10.24) | 4 | (21.11) |
| 5 | 57 | −0.8353 | −0.1453 | 5 | (−0.30) | 5 | 5 | (3.37) | 5 | (6.30) |
| constant term | | 0.2324 | | | | | | | | |

(a) The Pearson correlation coefficients are in parentheses.
(b) The procentual contribution of the variable to Mahalanobis distance is in parentheses. This contribution can possibly be negative.
(c) The partial multivariate F-values are in parentheses.
Mahalanobis $D^2$: 1.7533 — Hotellings $T^2$: 449.2426 (deducted F-value: 89.5319 — F-distributed with 5 and 1131 d.f.)
Wilk's lambda: 0.7251 — Rao's Ra: 85.7570 (F-distributed with 5 and 1131 d.f.)
— Bartlett V: 364.037 (approximated Chi-square with 5 d.f.)

Classification results

| Critical value (discriminant score) | Misclassification (%) "non-failed" sample | Misclassification (%) "failed" sample |
|---|---|---|
| −3.6199 | 0.00 | 93.59 |
| −1.0013 | 5.09 | 62.31 |
| −0.4512 | 9.91 | 45.64 |
| 0.0000 | 19.54 | 30.77 |
| 0.1760 | 25.97 | 25.90 |
| 0.3378 (optimal) | 31.59 | 17.18 |
| 0.6326 | 43.51 | 10.00 |
| 0.8646 | 52.07 | 5.13 |
| 2.5854 | 91.57 | 0.00 |
| 0.000 (Lachenbruch) | 20.75 | 28.46 |

studies resulting from the fact that their models are based on a non-representative sample cannot be eliminated by application of the Lachenbruch procedure. In discussing the sampling technique, we have already noted the more or less artificial character of thedefinition of the (sub)populations. The definition was based on the concept "calendar year."

The application of the discriminant model in a predictive context accentuates in various ways the time aspect. There is the problem of the intertemporal stability of the model (variables + parameters). Strictly speaking, the same populations for judging the performance of a specified model, as those that are considered for the building of the model, must be used. A firm, classified in the "failing" group by the function "one year before failure," is classified correctly only in the case that this company fails in the calendar year that follows immediately the calendar year in which the analyzed financial year ends. In the case of one discriminant function per annum, the question remains as to which model to apply in a practical situation for predictive purposes. The application of all disposable models is often advocated. Assume, for example, that five models have been developed, one function per annum, from one to five years before failure. The five models are then applied on a specific annual account of a firm. In the case that the examined annual account is classified in the "failing" group by all five models, one must conclude that a great chance exists that the firm will fail in the near future. Nevertheless, if that firm really fails within five calendar years after the financial year concerned, it will be misclassified by four of the five models. One implication is that the model "two years before failure," for example, must be prepared using a representative sample of annual accounts "two years before failure" and a representative sample of "non-failing" firms (as defined by preparing the time framework): annual accounts one or three years before failure are consequently excluded.

The research obviously has a retrospective character. What is demonstrated is that the failing and non-failing firms have dissimilar ratios, not that ratios have predictive power. The crucial problem is to make an inference in the reverse direction (i.e., from ratios to failure — prospective study). It must be demonstrated that a random sample of annual accounts, classified on the basis of ratio values, can imply failure and non-failure.[13] Another important item

[13] C. Johnson, "Ratio Analysis and the Predicton of Firm Failure," *Journal of Finance* (December 1970).

to consider is that the annual accounts are not directly available at the end of the financial year. One can even assume that failing firms have a greater reporting delay. However, there is no empirical verification of this assumption within the Belgian context. Briefly, the discriminant score is a summarizing variable that gives an important indication of the financial situation of the firm.

## APPENDIX.

This article contains some of the results of a research project concerning the determinants and the prediction of failure. For comparison purposes with other publications on the same project, the numbering of the ratios in the original data set is maintained. Every item of the annual account can be identified by means of a mechanographical number.

| n.r. | Definition | Mechanographical numbers |
|---|---|---|
| 9. | Fixed working assets / operating income | 199 + 299 + 399 / 5199 |
| 12. | Stock goods in course of production, waste products and finished products / total costs | 619 + 629 / 4199 − 5119 − 5129 |
| 15. | Working assets / total assets | 199 + 299 + 399 + 699 + 799 + 1099 / 1999 |
| 22. | Financial assets / financial assets + liquid assets + temporary investments | 499 + 599 / 499 + 599 + 899 + 999 |
| 35. | Equity capital / total liabilities | 2199 + 2299 + 2399 + 2499 + 2599 + 2699 / 1999 |
| 36. | Gross earnings before interest and taxes / total assets | 5199 − 4109 − 4119 − 4121 − 4149 + 5299 − 4222 + 5319 + 5329 + 5409 − 4329 − 4402 / 1999 |
| 37. | Depreciations / costs of formation + intangible fixed assets + tangible fixed assets | 4131 + 4202 − 5301 + 4301 / 199 + 299 + 399 |
| 47. | Financing costs on debt capital − depreciations on agio's and loan costs of long-term debts / debt capital | 4209 + 4219 − 4202 + 4204 / 2799 + 2899 + 2999 + 3099 |
| 50. | Tax on results for the financial year / profit before taxes | 4401 / 4509 − 5509 + 4401 + 4339 |
| 57. | Short-term debts to credit institutions / short-term liabilities | 2919 / 2999 + 3099 |
| 58. | Purchases / short-term debts in respect of purchases of merchandise and services received | 4101 + 4111 / 2929 |
| 62. | Overdue short-term priority debts / short-term liabilities | 7401 + 7402 / 2999 + 3099 |
| 67. | Stock goods in course of production, waste products and finished products / current working assets | 619 + 629 / 699 + 799 + 1099 |

| n.r. | Definition | Mechanographical numbers |
|---|---|---|
| 68. | Amounts becoming due and payable within one year in respect of sales and services rendered / current working assets | 709 / 699 + 799 + 1099 |
| 69. | Other current working assets / current working assets | 719 + 1099 / 699 + 799 + 1099 |
| 73. | Increase of value of revaluation / fixed assets + stocks | 2599 / 299 + 399 + 499 + 699 |
| 79. | Guaranteed debts / total debts | 7101 + 7102 + 7103 + 7104 / 2899 + 2999 |
| 83. | Long-term liabilities / long-term liabilities + equity capital | 2799 + 2899 / 2199 + 2299 + 2399 + 2499 + 2599 + 2699 + 2799 + 2899 |
| 84. | Financing costs on debt capital / net earnings | 4209 + 4219 / 5199 − 4109 − 4119 − 4121 − 4149 + 5299 − 4222 + 5319 + 5329 + 5409 − 4329 − 4402 − 4131 + 4134 + 5301 − 4301 − 4132 − 4221 + 5302 − 4302 − 4133 + 5303 − 4303 − 4122 + 5304 − 4304 − 4319 |
| 86. | Cash flow / debt capital | 5199 − 4109 − 4119 − 4121 − 4149 + 5299 − 4222 + 5319 + 5329 + 5409 − 4329 − 4402 − 4209 − 4219 + 4402 − 4204 − 4401 / 2799 + 2899 + 2999 + 3099 |
| 87. | Long-term liabilities / cash flow | 2899 + 2799 / 5199 − 4109 − 4119 − 4121 − 4149 + 5299 − 4222 + 5319 + 5329 + 5409 − 4329 − 4402 − 4209 − 4219 + 4202 − 4204 − 4401 |
| 89. | Net operating results / turnover | 5100 / 5109 + 5139 |
| 90. | Net earnings / total assets | 5199 − 4109 − 4119 − 4121 − 4149 + 5299 − 4222 + 5319 + 5329 + 5409 − 4329 − 4402 − 4131 + 4134 + 5301 − 4301 − 4132 − 4221 + 5302 − 4302 − 4133 + 5303 − 4303 − 4122 + 5304 − 4304 − 4319 / 1999 |
| 93. | Turnover / current assets | 5109 + 5139 / 699 + 799 + 899 + 999 + 1099 |
| 103. | Net earnings / profits before taxes | 5199 − 4109 − 4119 − 4121 − 4149 + 5299 − 4222 + 5319 + 5329 + 5409 − 4329 − 4402 − 4131 + 4134 + 5301 − 4301 − 4132 − 4221 + 5302 − 4302 − 4133 + 5303 − 4303 − 4122 + 5304 − 4304 − 4319 / 4509 − 5509 + 4401 + 4339 |

| n.r. | Definition | Mechanographical numbers |
|---|---|---|
| 109. | Equity capital + long-term liabilities / fixed assets | 2199 + 2299 + 2399 + 2499 + 2599 + 2699 + 2799 + 2899 / 199 + 299 + 399 + 499 + 599 |
| 111. | Fixed assets / equity capital | 199 + 299 + 399 + 499 + 599 / 2199 + 2299 + 2399 + 2499 + 2599 + 2699 |
| 113. | Liquid assets / current assets | 999 / 699 + 799 + 899 + 999 + 1099 |
| 114. | Long-term liabilities / total liabilities | 2799 + 2899 / 1999 |
| 116. | Liquid assets / debt capital | 999 / 2799 + 2899 + 2999 + 3099 |
| 121. | Current assets − short-term liabilities / cash costs + taxes + distribution of profits | 699 + 799 + 899 + 999 + 1099 − 2999 − 3099 / 4109 + 4119 + 4121 + 4149 + 4201 − 4203 + 4219 + 4222 + 4329 + 5400 + 4639 + 4649 + 4659 |
| 122. | Current assets − stocks − short-term liabilities / cash costs + taxes + distribution of profits | 799 + 899 + 999 + 1099 − 2999 − 3099 / 4109 + 4119 + 4121 + 4149 + 4201 − 4203 + 4219 + 4222 + 4329 + 5400 + 4639 + 4649 + 4659 |
| 124. | Net earnings / equity capital + long-term liabilities | 5199 − 4109 − 4119 − 4121 − 4149 + 5299 − 4222 + 5319 + 5329 + 5409 − 4329 − 4402 − 4131 + 4134 + 5301 − 4301 − 4132 − 4221 + 5302 − 4302 − 4133 + 5303 − 4303 − 4122 + 5304 − 4304 − 4319 / 2199 + 2299 + 2399 + 2499 + 2599 + 2699 + 2799 + 2899 |
| 129. | Fixed assets / total assets | 199 + 299 + 399 + 499 + 599 / 1999 |
| 131. | Current assets − stocks / total assets | 799 + 899 + 999 + 1099 / 1999 |
| 135. | Profit or loss brought forward from the previous year / total liabilities | 2499 / 1999 |
| 137. | Cash flow / turnover | 5199 − 4109 − 4119 − 4121 − 4149 + 5299 − 4222 + 5319 + 5329 + 5409 − 4329 − 4402 − 4209 − 4219 + 4202 − 4204 − 4401 / 5109 + 5139 |
| 143. | Participations / total assets | 401 + 411 / 1999 |
| 146. | Profit or loss brought forward from the previous year + reserves / total liabilities | 2399 + 2499 / 1999 |

# *Industrial Accounting in Poland's Reorganized Economy*

MAUREEN BERRY and ALICJA JARUGA*

## POLAND'S ECONOMIC REORGANIZATION

In the fall of 1980, the Polish government convened a special commission to draft a comprehensive plan for reforming the economy.[1] During the following year, proposals were stated,[2] discussed, debated, and amended, and the process of formal, legal adoption commenced. By the beginning of 1982, changes were already well under way.

The sense of urgency and speediness of action stemmed from the deteriorating national economic situation. Severe shortages of raw materials, energy, labor, and machinery had drastically reduced industrial output. As the shortages grew, all aspects of Polish economic life faced increasing pressures. The Economic Reform

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[1] The Commission on Economic Reform (Komisja do spraw Reformy Gospodarczej) was initially convened in September 1980 and consisted of thirty-four members, many of whom represented the central administration. Shortly afterwards, the size and composition of the Commission was changed to provide more balance. The new ninety-person Commission included equal representation from the following main groups: academics, those engaged in social activities, representatives from business and industry, and representatives from central and local state administration. From Wladyslaw Baka, *Polska Reforma Gospodarcza* (Panstwowe Wydawnictwo Ekonomiczne, 1982).

[2] The Commission on Economic Reform issued its first report, "The Basic Foundations of Economic Reform (project)," in January 1981. A second report, "Directions of Economic Reform," was included in the official documentation of the Ninth Extraordinary Congress of the Polish United Worker's Party held July 14-20, 1981.

Commission blamed this crisis on a number of factors, such as production inefficiencies and infrastructural defects. Also, the overexpansion of hard-currency debt during the previous decade, with its debt service requirements, severely curtailed any possibilities of acquiring needed imports. In the Commission's opinion, an economic recovery program required fundamental changes in planning and management methods to increase the efficient use of all available factors of production. Consequently, the reform measures automatically focused on the primary users of the production factors: the state enterprises which constitute the nation's basic economic units.[3]

The new institutional arrangements for state enterprises took the form of three basic principles, known collectively as the "triple-self rule": self-financing, self-dependence, and self-management.[4]

*Self-financing* means that recognition of the basic relationship between costs and prices has been restored, at least in the short run. To strengthen the economic accountability function, all enterprises are, in theory, required to recover at least their operating costs without state financial support. Several considerations have, however, steered public policy away from the full implementation of this principle. Due to continued shortages and sellers' markets, the state still provides some operating subsidies, mainly for food items, and intervenes in some resource allocation processes, as well as price setting, on the grounds of consumer protection.

Price setting takes three main forms: government price ceilings, known as *fixed*, or *controlled* prices, for essential commodities, in order to economize on scarce resources or to help those in the lowest income brackets; *contractual*, that is, free or negotiated prices, which are permitted only when there is an equilibrium of supply and demand; and *regulated* prices, which are set by the enterprise and based on cost. The state Agency for Prices (Urzad Cen) specifies the costing standards to be used in these calculations and establishes maximum profit margins.

The *self-dependence* principle provides for enterprise-level decision making with respect to setting prices, subject, of course, to the law, as well as the constraints of state intervention. Now that the national socioeconomic plan has been relegated to the status of a general guideline, enterprises have a relatively free hand in setting

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[3] This is the definition of a state enterprise, defined in Article 1.1 of the law on state enterprises dated September 25, 1981. See *Dziennik Ustaw* (1981), nr 24, poz. 122.

[4] Ibid., article 1.2.

their own production plans and determining their resource requirements within the framework of the central plan's overall parameters.

The *self-management* principle assigns to management personnel the primary responsibility for making certain operating decisions. However, the enterprise's Employees' Council has ultimate authority for such key decisions as work and pay conditions, bonuses and other awards, and allocations from distributable profits for various purposes.

The triple-self rule completely changed the functional roles of the top-level and economic ministries. The traditional three-tier, vertical hierarchy, which linked industrial ministries for particular branches of industry to their sponsored enterprises through administrative units, known as "unions" (zjednoczenia), has now been dismantled. Although each state enterprise still has a founding governmental body, most of the branch ministries, and all of the unions, have been liquidated.[5] Remaining ministries are now required to concern themselves with economic policy making rather than with administrative directives and controls over enterprises. The economic performance of enterprises is to be evaluated on the basis of profitability, and a new bankruptcy law makes it theoretically possible for state enterprises to go out of business.[6]

Other across-the-board measures include changes in the general price level, which had been frozen for ten years, as well as changes in the relationships between the sales prices of almost all goods and their prime costs of raw materials, fuel and energy, and labor. Beginning in 1983, all enterprises were required to revalue fixed assets, some as much as several hundred percent, using official indexes. These revaluations replaced historical costs in the accounting records, thereby increasing both depreciation expenses and amounts to be set aside for asset replacement (a practice referred to as "funding depreciation" in the United States and "amortization" in Poland). At the present time, most state enterprises are required to transfer 50 percent of funded depreciation to the state: a practice which works against the self-financing rule

[5] In 1981, the following branch ministries went out of existence: Machine Industry, Mining, Heavy and Agricultural Machinery, Chemical Industry, Light Industry, Metallurgy, Energetics and Nuclear Energy, Agriculture, and Food Industry. Some of them were reactivated in the four chief organs of state administration which replaced the branch ministries, namely the Ministries of Metallurgy and Machine Industry, Mining and Energetics, Chemical and Light Industry, and Food Administration.

[6] *Dziennik Ustaw* (9 July 1983), nr 36, poz. 165.

since it prevents enterprises from making their own provisions for the current cost replacement of fixed assets. This policy was dictated, however, by a perceived need to exert some centralized control over enterprise investment programs.

These moves toward a more market-oriented economic system have necessarily had an impact on management accounting because of the new emphasis on cost determination and profitability assessment. An important question, to be discussed later, concerns the prospects for the further development of management accounting as the economic reforms begin to take hold. To gain a perspective on this issue, an understanding of the system of industrial cost accounting which has emerged during this transitional stage is first necessary.

## THE STRUCTURE OF ENTERPRISE ACCOUNTING

Historical events and Poland's international culture are reflected in the overall design of industrial enterprise accounting. At the end of World War II, Poland, as well as several other European nations, initially adopted the German uniform accounting system introduced during the occupation. This system featured a basic cost classification pattern of: Costs by Nature ⟶ Costs by Cost Centers ⟶ Costs by Products, as well as segregated, but integrated, financial and cost accounting cycles. Later modifications included several Soviet practices, including harmonization of certain nomenclature, and the replacement of cost distribution spread sheets by analytical (subsidiary) records or accounts for analysis purposes. In Poland, for example, individual indirect expense elements classified as "departmental costs" or "general overhead and administrative costs" are recorded in synthetic (general ledger) accounts bearing those generic titles. Details of the constituent expense elements are maintained in analytical records. In the United States, on the other hand, individual general ledger accounts are usually provided for the various expenses which fall under such generic headings as "general and administrative expenses" or "selling expenses."

Congruent with the French use of "mirror" accounts, Poland uses contra accounts to segregate the main stages of cost movements. That is, instead of making direct credits to individual cost accounts when recording transfers out of the "costs by nature" classification and into production, a credit-balance contra account is used.[7] The Polish technique was designed for macroaccounting

[7] An equivalent practice in the United States is the use of a credit balance "applied factory overhead" account.

purposes, but it has the additional advantage of leaving clear audit trails as costs progress through the various stages of classification and accumulation. Poland has retained the two separate but integrated cycles for financial and cost accounting. This feature serves social statistical purposes, however, by permitting calculation of enterprise financial results on two different bases and has not been extended to provide for other management-relevant information such as imputed costs.[8]

In making its most recent system-design changes, Poland considered the experience of its market-oriented neighbor, Hungary. Beginning with fiscal year 1984, general factory and administrative expenses are treated as a period charge rather than as an element of production costs. This innovation constitutes not only a move toward direct costing but is also designed to make enterprises more cost conscious now that these indirect expenses can no longer be inventoried.

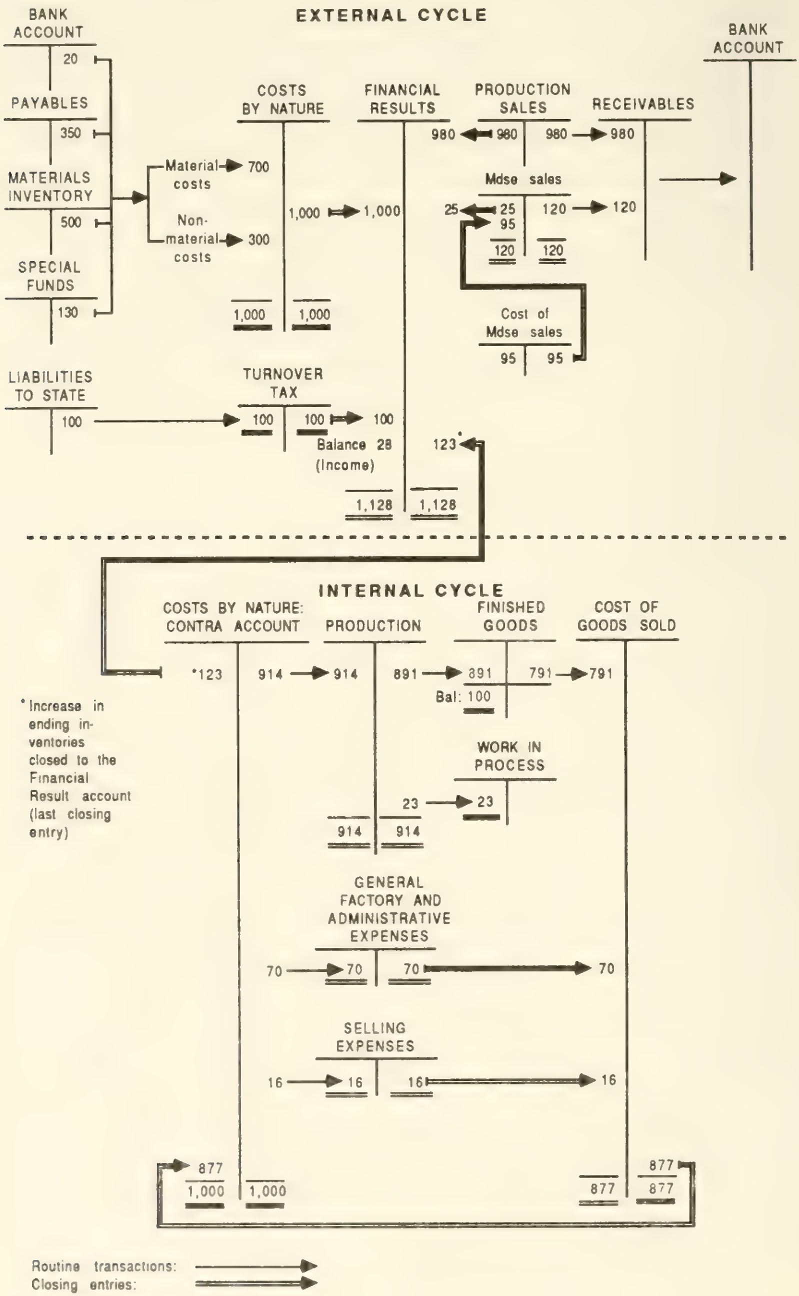
A simplified outline of the structure of Poland's two-cycle accounting system is presented in Exhibit 1. In the external cycle, the financial result account, which constitutes earnings before income tax and a new form of payroll tax, accumulates through closing entries the broad categories of data needed for calculating both national income and enterprise profitability. These data include costs classified by nature; sales; turnover tax, which is included in sales; various subsidies; and the gross profit on sales of commodities such as by-products. Two other types of transactions, to be described later, are extraordinary profits and losses and equalizing settlements. The final closing entry acts as the linchpin between the two cycles by transferring to the financial result account the net increase or decrease in production inventories for the period.

Before calculating enterprise results from both macro and micro standpoints, we need to describe the Polish method of determining national income.[9] In common with other socialist countries, Poland includes only its "material production area" in national income calculations. Activities of a "productive" nature include product manufacture, including repairs and maintenance; transportation

[8] For an illustration of the German two-cycle accounting system with imputed costs, see Hanns-Martin W. Schoenfeld, *Cost Terminology and Cost Theory: A Study of Its Development and Present State in Central Europe* (Urbana, Ill.: University of Illinois Center for International Education and Research in Accounting, 1974), 31.

[9] For a more comprehensive description see, Glowny Urzad Statystyczny, *Rocznik Statystyczny* (Warsaw, 1984), 70-72.

**Exhibit 1. Basic Structure of Poland's Two-Cycle Accounting System**



and delivery of products to customers; and work expended on providing transportation services to the public. Areas of the economy which are engaged in "material production" include industry, construction, agriculture, forestry, transportation and communications, trade, the local economy, and a broad "other" category which includes publishing, the film industry, informational services, and multidivisional units providing material services.

For macroaccounting purposes, costs by nature must be classified as either "material" or "non-material." Costs which fall into these classifications are detailed in a later section dealing with costs by nature. *Gross national income* is determined by deducting "material" costs, other than depreciation, from the total amount of production created in the material production area. A further deduction of fixed asset depreciation expense from gross national income then yields *net national income.* The components of net national income, also known as net production (produkcja czysta), are, therefore, nonmaterial costs and accumulation (akumulacja) consisting of the financial results including turnover tax, subsidies, and other state settlements.

From Exhibit 1, an enterprise's contribution to national income can be calculated as follows:

| | | |
|---|---|---|
| Sold production | 980 | |
| Gross profit on sale of commodities | 25 | 1,005 |
| Plus unrealized production (increases in inventories) | | 123 |
| Total production | | 1,128 |
| Less: | | |
| Material costs (700) less assumed amount of 80 for depreciation expenses | | 620 |
| Contribution to gross national income | | 508 |
| Less depreciation of fixed assets | | 80 |
| Contribution to net national income | | 428 |

An alternative way of arriving at the same result is

| | | |
|---|---|---|
| Nonmaterial costs | | 300 |
| Accumulation | | |
| Turnover tax | 100 | |
| Net profit before income tax | 28 | 128 |
| Net production | | 428 |

The value of unrealized production is determined in the internal

accounting cycle and, as mentioned earlier, is the key item which links the two cycles together. Costs by nature are transferred to the internal cycle via the cost-clearing account, and then they flow in two divergent streams. One stream takes inventoriable costs through production, on to inventory accounts, and then to cost of sales. The other stream directs selling expenses, or general factory and administrative expenses, to cost of sales as period costs. The cost of sales is closed to the cost clearing contra account which, it will be recalled, had previously been credited for the total cost input. Consequently, any balance remaining in the cost-clearing contra account would be attributable to inventory increases or decreases. This balance is closed to the financial result account, thereby bringing the two cycles into equilibrium. Now that the broad outline of the two-cycle system has been sketched, we will concentrate on the details of the industrial cost accounting system.

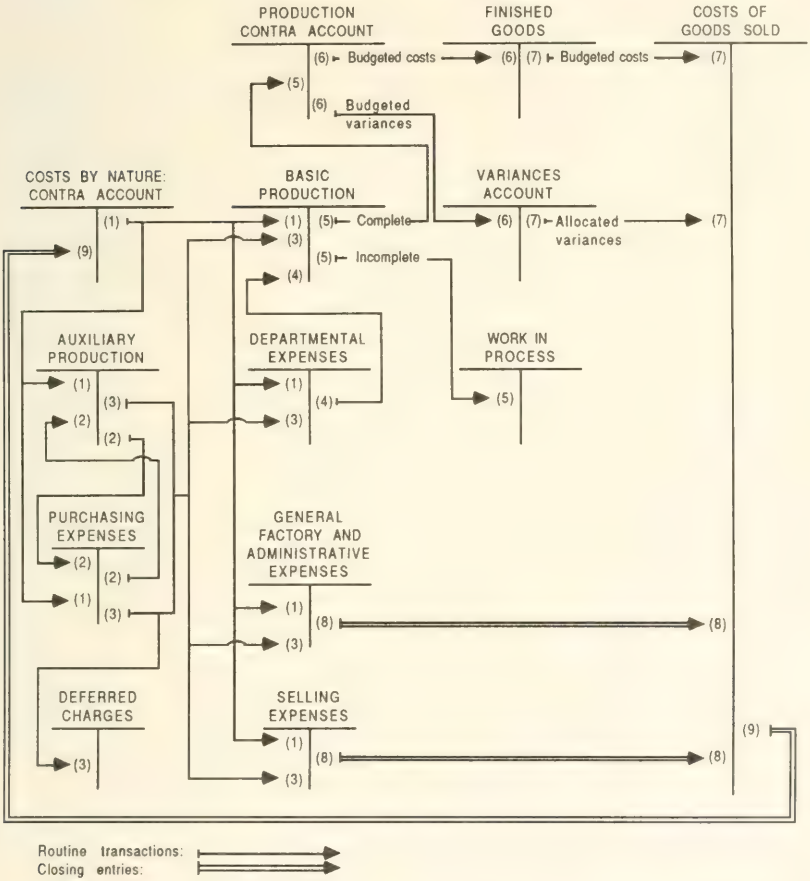
## THE NEW COST ACCOUNTING GUIDELINES

In November 1983, the Ministry of Finance issued new guidelines for gathering, calculating, and analyzing production costs in state industrial enterprises.[10] These guidelines prescribe the minimum requirements for uniformity of practice in the interests of financial control, central planning needs for information, and evaluation of reported enterprise performance. That is, certain cost accounting principles, such as the classification structure of costs by nature and the scope of cost calculations, are mandatory. Otherwise, a considerable amount of flexibility is permitted for management information purposes. Although the guidelines mainly concern actual (historical) cost accounting, enterprises are encouraged to develop standard and variance costing systems which reconcile to the historical cost records practices which are still very underdeveloped. Enterprises are also free to run parallel direct costing systems which, although for internal use only, should promote both cost control and the fixed versus variable cost orientation which is needed for analyses such as idle capacity and break-even, as well as flexible budgeting.

A more detailed sketch of the cost flows in the internal accounting cycle is provided in Exhibit 2. The starting point is the accumulation of costs in the cost by nature accounts.

[10] Zarzadzenie Ministra Finansow z dnia 7. XI. 83. *Dziennik Urzedowy Ministerstwa Finansow nr. 17/83.*

**Exhibit 2. Cost Flows in the Internal Accounting Cycle**




KEY:

(1) Costs are transferred into the internal accounting cycle by crediting the costs by nature contra account.

(2) Cost transfers between auxiliary production and purchasing expenses.

(3) Cost allocations from auxiliary production and purchasing expenses.

(4) Departmental expenses allocated to basic production.

(5) Actual costs of completed and incomplete production are transferred to the production contra account and the work in process inventory account, respectively.

(6) The budgeted costs of completed production are transferred to the finished goods inventory. Any variances between actual and budgeted costs are transferred to the variances account.

(7) The cost of goods sold is recorded with budgeted costs and allocated variances separately identified.

(8) General factory and administrative expenses and selling expenses are closed to cost of goods sold at the end of the fiscal period.

(9) The cost of goods sold account is closed to the costs by nature contra account at the end of the fiscal period.

## COSTS BY NATURE

For national statistical purposes, costs by nature are classified as "material" costs of nonlabor production factors, and "nonmaterial" costs which contribute value-added.

*Material* costs include amortization and depreciation, materials used, power and energy, and outside services and processing of a "material" nature. The amortization of certain types of deferred charges and the depreciation of fixed and leased assets are made on a straight-line basis using centrally established uniform rates. As mentioned, the 1983 comprehensive revaluation of fixed assets resulted in the substitution of indexed values for historical costs. Because of the magnitude of the consequent increase in annual depreciation charges, enterprises were permitted to amortize the first year's depreciation adjustment over three years.

The costs of various materials used include raw materials, purchased products, spare parts, packaging materials, and fuel, as well as small tools costs reduced by scrap value, and normal amounts of inventory shrinkage. Average cost is generally used, although first-in, first-out (FIFO) and last-in, first-out (LIFO) costing methods may also be found in practice. Power and energy are charged on the basis of the value assigned by the supplier.

*Nonmaterial* costs include wages and salaries, surcharges on earnings, charges to special-purpose funds, and nonmaterial external services. The payroll includes earnings paid in money or in kind, except amounts provided by charges against special funds. Surcharges mainly consist of a 20 percent payroll tax on wages and salaries, plus a 43 percent social insurance contribution.

Costs are also created through special charges, such as charges for the enterprise's social fund, housing fund, and fund for technical development. Amounts raised through these charges must be segregated, and the maximum amounts which may be accounted for as costs are regulated. For example, social fund charges may not exceed 50 percent of the lowest national average pay multiplied by the size of the enterprise's work force. For the housing fund, a 25 percent rate is substituted.

Nonmaterial external services include real estate taxes, bank charges and interest on loans, certain rents, business travel expenses, and payments to employees for the business use of personal material and equipment.

Before tracking the flows of costs to and through the various cost centers, it is useful to identify the cost-determination elements and their general classifications, as well as to provide definitions.

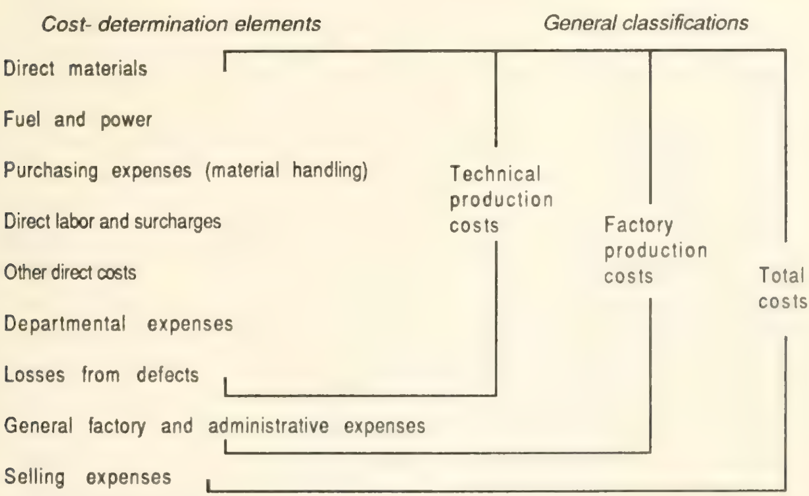
## COST-DETERMINATION ELEMENTS

The cost-determination elements and their general classifications for an industrial enterprise manufacturing various products are presented in Exhibit 3.

Direct costs are determined in the same way as in the United States, and the allocation bases for indirect expenses are also very similar in both countries. There are, however, differences in the composition of the indirect expense pools.

*Departmental expenses* are factory overhead expenses, according to U.S. cost accounting terminology, because they constitute indirect production costs originating in basic production departments. However, as explained later, a number of costs which would be classified as factory overhead in the United States are included in general factory and administrative expenses in Poland. Departmental expenses mainly include costs of maintaining machinery and other production equipment in service, departmental management, storage and technical inspection of products, heating, lighting, work safety and hygiene, and maintenance of buildings. A number of alternative allocation bases are permitted, assuming that the chosen base will best reflect the most equitable or appropriate relationships between base and pool. In practice, the most prevalent bases are direct labor hours, machine hours, or direct

**Exhibit 3**



labor costs plus surcharges. The guidelines recommend the use of constant (predetermined) allocation rates based on planned rates or on the prior year's experience. Any differences between actual and constant rates would be treated as costs of finished products.

*Losses from defects* are charged with the costs of defective products which cannot be corrected, as well as the costs of correcting defects and performing repairs under warranties, decreased by any scrap values or compensation awarded. Those enterprises, which are authorized to create reserves for guaranteed repairs, can estimate warranty expenses rather than record incurred costs only. In mass production, losses from defects are charged to the current production costs of products to which the defects are related. In job-order or individual production, defect losses are charged to those products in which the defects originated. In cases where such costs cannot be recovered, such as when final settlement has already been made with the customer, for example, they are included in general factory and administrative expenses.

*General factory and administrative expenses* consist of three elements: the administrative costs of the enterprise as a whole, general factory overhead not directly identifiable with particular departments, and certain other expenses which would be included in selling or markteing expenses in the United States.

The factory overhead items include technical improvement costs, and security services and maintenance of buildings, laboratories, and technical construction offices. Examples of the sales-related expenses include pay plus surcharges for permanent sales personnel, costs of maintaining nondepartmentalized marketing units, shipping office costs, sales-related travel and delegation (i.e., to conferences, etc.) costs, and product analysis and testing.

The change to period cost treatment for general factory and administrative expenses in 1984 introduced a modified direct costing approach, the argument being that because most of those expenses are fixed, they should be covered by the current year's profit margin. This concept was not, however, extended to include fixed departmental expenses, which are included in the technical production costs. As in the case of revaluation depreciation, enterprises are permitted to charge the first year's financial effects of this accounting change over a three-year period.

For special purposes, such as profitability evaluation for certain products or establishing prices on a cost-plus basis, general factory and administrative expenses may be treated as allocable to production on condition that these cost studies not form part of the

formal accounting system. Possible allocation bases may include total direct labor costs plus departmental expenses, technical production costs, or the value of production to be marketed.

*Selling expenses* refer to a limited number of costs incurred in connection with sales efforts. Advertising expenses are included, as well as the costs of transferring goods directly from production, or from the enterprise's own warehouses, to the buyer. In a multidepartmental enterprise with a centralized sales activity, the costs of maintaining departmental warehouses of goods for sale may also be included in selling expenses. Selling expenses are charged to cost of sales as period costs and are allocated to those products which generate selling expenses, using some appropriate basis which considers relative sales administration effort and selling techniques.

### COSTS BY COST CENTER AND PRODUCT

The assignment of cost, by cost element, during the production phase follows the same general costing philosophies as in the United States, but it diverges from U.S. practice in certain respects.

Poland, in common with other socialist countries, distinguishes between basic production, or main output effort, and auxiliary production, consisting of such support activities as transportation, conservation-renovation, energy supply, and workshops making tools and instruments.

Costs are first transferred from the cost by nature clearing contra account to the main cost centers: basic production, auxiliary production, purchasing expenses (material handling), departmental expenses, general factory and administrative expenses, and selling expenses. Auxiliary production costs are usually allocable to basic production, departmental expenses, general factory and administrative expenses, and deferred charges. This latter account may also occasionally receive charges from basic production, such as research and development costs.

Deferred charges, known in Poland as interperiod costs, include costs of preparing new production, certain fixed asset repairs, and special cases such as the cost of sales for export delivery when costs have been incurred but when the related sales have not yet been recognized for accounting purposes. They are generally amortized over three years, although a five-year write-off period is permitted under special circumstances.

Costs of completed production are transferred at actual cost to the production contra account. There they are analyzed by cost

element and compared with budgeted amounts or statistical estimates. Because this cost analysis involves analytical or memorandum records, it operates differently from the American use of general ledger standard cost and variance accounts. Under the Polish approach, budgeted costs and variances for materials, labor, and departmental expenses are separately identified when completed production costs are transferred to the finished goods account(s) and when costs of sales are recorded. These transfers may be based on FIFO, LIFO, or weighted average costing methods. In job-order costing, work in process is allocated a share of the total budgeted cost variance in proportion to the percentage of work completed.

## DETERMINING THE FINANCIAL RESULT

The financial result is calculated in the following manner:

Sales
Less cost of sales
Plus/minus profit or loss on other (casual) sales
Plus extraordinary profits
Minus extraordinary losses
Minus turnover tax
Plus subsidies
Plus/minus favorable or unfavorable equalizing settlements in foreign trade
Plus/minus favorable or unfavorable price equalization differences
Equals the financial result.

Certain of these terms merits explanation.

### Extraordinary Profits and Losses

Extraordinary profits and losses are defined as those transactions which cannot be anticipated and consequently cannot be provided for in advance, or do not occur regularly, or cannot be considered as usual (normal) economic transactions. Thus, these characteristics are more inclusive than those which define extraordinary profits and losses in the United States. Examples follow.

| Extraordinary profits | Extraordinary losses |
|---|---|
| Additional current assets discovered during inventory taking. | Losses of tangible assets, such as money, materials, or products, resulting from fires, catastrophes, theft, etc. |

| | |
|---|---|
| Receipts from receivables previously considered to be uncollectible. | Losses from obsolescence of fixed assets or liquidation of assets not fully depreciated. |
| Compensation received as damages, as well as additional interest paid as penalties by customers or suppliers. | Shortages of current assets discovered during inventory taking. |
| | Write-off of bad debts. |
| | Various types of industrial fines and penalties. |

### TURNOVER TAX

Under the recent reforms, the turnover tax became one of the elements used in setting prices. Consequently, it is an important mechanism for central steering with respect to contractual or regulated prices. The need for flexibility in varying the turnover tax in order to stabilize the market in certain sectors is reflected in the 1983 budget law. This law empowers the Minister of Finance to change turnover tax rates during the course of a fiscal year in response to market conditions or a justified growth in production costs.

In 1983, turnover taxes increased over 1982 by approximately 50 percent. With respect to contractual or regulated prices, tax rate increases affected luxury consumer goods, such as automobiles, televison sets, and certain household equipment.

### SUBSIDIES

The extent of subsidies, which in 1983 covered a wide range of products, is now limited to a few vital necessities: food, coal, and transportation. Another essential change lies in the structure of subsidies, with increases going to foodstuffs and supplies and decreases for non-foodstuff consumption items. For items with regulated prices, such as children's shoes, subsidies are provided based on state economic policy. Where prices are set by the state (fixed or controlled prices), subsidies are given where prices are lower than production costs or purchase costs to the supplier. Subsidy rates vary between industries and may also change during the course of a budget year as a result of enterprise profitability evaluations made by the appropriate financial control organization.

### DISTRIBUTION OF THE FINANCIAL RESULT

The audited profit, minus turnover taxes, is known as distributable profit, and there are two main types of profit distributions: mandatory and discretionary. Mandatory distributions, considered first,

consist of a linear income tax and charges for a newly created reserve fund.

Enterprise income tax is paid in periodic installments on an estimated basis, pending an audit of the financial result on behalf of the state Treasury Department. After audit verification, the financial result is subject to adjustment, for tax-determination purposes only, for any costs or losses determined to be "unjustified."[11] This nomenclature is applied to items such as certain levels of increases in administrative expenses as compared with the prior year; certain percentages of the costs of repairing defective products returned by customers; and various fines imposed for violating enrionmental protection regulations, or for producing substandard output. The audited financial result, with any unjustified costs or losses added back, is then subject to a 55 percent income tax.

The excess earnings tax was conceived as a mechanism to control wage and salary increases. The underlying rationale posits that pay raises should be justified by, or linked to, increased output. A certain minimum level of pay increases, matched against a minimum level of increased output, calculated from adjusted sales figures, known as net production surplus, is free of this charge. Above these levels, progressive tax rates apply. Even though the excess earnings tax is charged against the financial result account, it is not technically a distribution of profit. If, for example, the enterprise has suffered losses, or has insufficient profit to cover the contribution, its loss will be increased.

The reserve fund is designed to help protect the enterprise against the financial consequences of possible losses and is built from a required minimum 10 percent charge against distributable profit. Contributions to the fund may be discontinued when its balance exceeds 4 percent of operating costs in a particular fiscal year. If the enterprise has a lower distributable profit in one year than in the prior period, or if it still has a balance in the reserve fund after covering losses, the enterprise is free to make a transfer from the reserve to the development fund to the extent that the remaining balance in the reserve fund is not less than 2 percent of the operating costs in the same fiscal year.

Discretionary distributions of profit include appropriations to special-purpose segregated funds, such as the development fund and the employees' fund. The development fund is primarily intended to be used for payments of bank credits advanced for

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[11] This same concept is used for cost determinations under U.S. Government contracts.

investments in fixed assets. However, it can also be used for financing acquisitions of turnover assets. The fund's resources are provided by discretionary charges against distributable profit, amounts set aside to match (fund) depreciation charges, and any proceeds from fixed asset disposals.

The employees' fund is intended to provide supplementary benefits for the enterprise's employees, in addition to those provided for as enterprise costs. The fund is normally used to cover bonuses and other types of financial rewards. Other funds may also be established for various other types of activities, such as financing social events or holidays for the employees.

### THE NEW CONCEPT OF JUSTIFYING COSTS INCURRED

The orientation of the economic reforms toward profit maximization and improved efficiency in resource utilization has led to wide-scale efforts to revise and improve enterprise cost accounting systems. A sense of urgency was both stimulated and strengthened by the new requirement, introduced by the state Agency for Prices (Urzad Cen) and also used by the Treasury's income tax authorities, that costs and losses must be justified or reasonable (uzasadnione) to be allowable.

Under the regulations issued by the former Minister for Prices,[12] costs and losses included in cost determinations for fixed and regulated prices must conform to enterprise standards. However, enterprise yardsticks must meet certain criteria, for example, standards or estimates which are acceptable if the enterprise has no standards may not exceed actual rates experienced in the production of similar goods. Because standard costing is very underdeveloped in Poland, most enterprises covered by these regulations have had to review the adequacy of their costing systems. The following outline of these new costing provisions provides some details of the data which some enterprises now must maintain to meet compliance requirements.

Commencing with direct charges, material costs must reflect standard quantities with allowance for scrap losses, and actual losses resulting from technology, limited to standard amounts. Labor cost calculations must be based on standard hours, multiplied either by actual average hourly pay rates or standard rates, for the particular operations involved, plus fringe benefits (which are treated as direct costs). Special costs, such as preparing for new production,

[12] Decree of the Minister for Prices, dated December 31, 1982, as to the principles for determining justifiable costs. See *Dziennik Ustaw* (1983), nr. 1, poz. 10.

or the costs of special tools and instruments, are to be amortized over the anticipated production period of three years, whichever is shorter, although a five-year period may be permitted, depending on the amount of costs and the length of production life involved. The costs of repairing defects, whether discovered by the enterprise itself or resulting from warranty claims by customers, cannot exceed enterprise standards. If no standards exist, such repairs may not exceed 50 percent of the prior year's actual experience.

In calculating indirect costs, overhead rates for departmental expenses and general factory and administrative expenses are to be based on actual costs incurred in the prior period, assuming full staffing or at least two-shifts capacity usage. An enterprise may, with the approval of its founding ministry, adopt other capacity rates because of its particular technology or because it was not working two full shifts in the prior year. Material handling and selling expense rates are also limited to the previous year's actual rates. The appropriate district agency for prices may, however, agree to raise allowable overhead rates if indirect cost increases over prior year amounts are attributable to circumstances beyond enterprise control, such as increases in transportation charges or in taxes accounted for as costs. A final provision relates to the learning curve, because these cost determination regulations assume mature (technically mastered) production. When, however, production is performed in a new work unit, or under a purchased license for new products, or requires the activation of new technological lines, average production costs must be estimated. These are calculated as the quotient of total anticipated costs and projected production quantities over the expected production period or three years, whichever is shorter.

An added cost efficiency is woven into a new economic policy which affects the method of determining allowable profit, such as in the case of "cost-plus" pricing. The base for profit margin calculation has now been changed from full cost to conversion cost, thus excluding all materials and purchasing costs, in order to link profitability with labor productivity.

## THE DEVELOPING NATURE OF THE ACCOUNTING FUNCTION

Poland's efforts to introduce possibilities for market self-regulation in tandem with central planning have necessarily required continual experimentation in identifying, developing, and refining appropriate mechanisms for improving enterprise efficiency and effectiveness. In addition to the important concept of "justified" costs,

just described, and the excess earnings tax, which attempts to link increases in wage levels with real increases in productivity, various other incentive plans have been introduced, such as bonuses aimed to motivate enterprises to economize on materials and energy.

The basic structure of the two-cycle accounting system has been kept intact. However, the new emphasis on microlevel efficiency obviously called for provisions for individualizing management information systems. So, flexible cost accounting guidelines were established whereby certain information, such as costing for price setting or profitability evaluation, can be developed independently of the formal accounting system. This relative pliancy in the cost accounting ground rules is also beneficial because both internal and external demands for information of various types and for various purposes are constantly changing.

Cash flow control has also assumed added importance, and this is reflected in a new accounting approach to revenue recognition, which is aimed at assuring the collectibility of recorded sales. Starting in 1984, accounts receivable which are not realized by January 25, that is, the first month of the new fiscal year, are excluded from the revenue of the year in which they were generated. Additional moves toward cash-based accounting, rather than accrual, are also being considered.

The academic community is heavily involved in the efforts to improve the accounting function, providing consulting services to the government and industry and offering continuing education courses. The prominence now accorded enterprise accounting information systems is hoped also to have a beneficial effect on the overall growth and development of the accounting function itself.

## BIBLIOGRAPHY

Baka, Wladyslaw. *Polska Reforma Gospodarcza.* Panstwowe Wydawnictwo Ekonomiczne, 1982.

*Dziennik Urzedowy* Ministerstwa Finansow nr. 17/83 (*Official Gazette* of the Ministry of Finance).

*Dziennik Ustaw (Law Gazette).* 1981, nr 24, poz. 122.

______. 1983, nr 1 poz. 10.

______. 1983, nr 36, 165.

Glowny Urzad Statystyczny. *Rocznik Statystyczny* (Warsaw, 1984).

Schoenfeld, Hanns-Martin W. *Cost Terminology and Cost Theory: A Study of Its Development and Present State in Central Europe.* Urbana, Ill.: University of Illinois Center for International Education and Research in Accounting, 1974.

# *Accountants' Legal Liability: An International Comparison*

PAUL HOOPER, JOHN PAGE, and KAREN SMITH*

During the past twenty-five years, the growth of public accountants' legal liability to third parties for negligence and fraud has reached beyond the most pessimistic (from the accountants' point of view) predictions of legal commentators of the early 1960s. Many and varied professional, business, and societal factors are responsible for the growth in the scope of this liability. It is now clear, however, that a major shift of investment risk from investors themselves to the independent accountants who certify financial statements has occurred. This shift of risk has manifested itself in skyrocketing liability insurance premiums, the withdrawal of professional liability coverage, and a general concern as to the scope of legal liability in the public accounting profession.

In light of these developments, a question arises as to how public accountants' legal liability has evolved in other countries with economic systems similar to that of the United States, and if the evolution has been different, the reasons for and implications of such differences. The accounting profession in the United States may be able to learn from the experiences in the similar but distinct legal systems of the United Kingdom and Canada, and the reverse may also be true. Because the accounting and legal establishments of the United Kingdom formed the basis of these systems in the United States, the United Kingdom is the most obvious and

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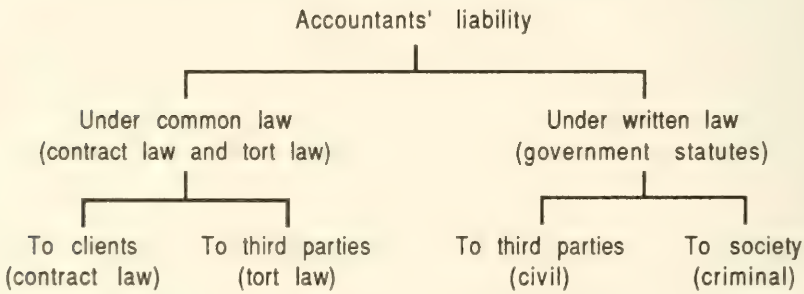
relevant nation to examine. In addition, because it is influenced heavily by the United Kingdom and by the United States, a study of Canadian practice may give additional insight.

## INSTITUTIONAL DIFFERENCES AMONG THE COUNTRIES

Both statutory and common law, as depicted in Exhibit 1, form the basic components of a legal system and influence litigation results involving accountants and its development. However, other factors may contribute equally to differences among nations. In examining the United Kingdom and the United States, environmental circumstances and certain procedures and legal norms reveal several distinct features. In the United States, early suits affecting liability did not focus on the accounting profession. But as the accounting establishment in the United States matured, uncertainty as to the scope of responsibility was resolved more and more frequently through the courts. By contrast, the accounting profession in England developed much earlier. Therefore, a lack of uncertainty meant relatively little court action, and common law did not simultaneously influence or promote changes within the profession. Only upon observation of developments within the United States were the courts used in the United Kingdom to expand liability. In the late 1960s and 1970s, when institutions as a group came under question in the United States, litigation again returned to the accounting establishment. Because these challenges were not as great in England, change again occurred first in the United States.

Procedural restrictions also aid in shielding the United Kingdom from the litigation experienced in the United States. The U.K.

**Exhibit 1. Sources of Legal Liability of Accountants**



system forbids contingent fees, which are currently popular among U.S. attorneys. While this device encourages the dissatisfied to attempt a suit, the U.K. rule acts as a deterrent to unnecessary cases. The rule is especially effective because within the United Kingdom, costs are of primary importance throughout a legal case. Whereas the successful U.S. party may recover only certain incidental trial expenses, in a U.K. court action, the loser pays much of the successful party's cost, including counsel fees. An appeal lost in the United Kingdom again requires payment of the opponent's expenses. Also, a party intentionally discontinuing an action must pay all the opposition's costs. This emphasis on cost avoidance discourages many suits and encourages pretiral settlement, thereby reducing court action.

A close ally to the contingent fee is the class action suit. Born in England, the class action suit has recently flooded the U.S. legal system. This procedural device theoretically saves the associated expenses and time of numerous common suits, while also ensuring a uniform decision among all plaintiffs. Although comparable to those in the United States, class action type suits in England are more restrictive and employed less frequently. Again, the focus on cost reimbursement decreases its potential use. The representative commencing the suit for other class members must bear any costs not reimbursed while receiving only his or her portion of the award. Without the contingent fee, the expenses associated with a possible loss of the case transform a suit into a very risky venture. In the U.S. system, costs are subtracted from the award before apportionment, thus the prospect of a relatively risk-less (for the plaintiff) class suit with a potentially large damage claim and adverse publicity encourages early settlement of many defendants of some questionable cases.

Finally, judicial norms such as *stare decisis* (adherence to precedent) have slowed the evolution of U.K. principles relative to the U.S. system. Until recently, U.K. courts relied extensively on early established opinions, whereas U.S. judges seemed more inclined to depart from early precedents as circumstances changed.

## COMPARISON OF STATUTE LAW

The Securities Acts in the United States, the Companies Acts of the United Kingdom, and the Canadian Business Corporations Act form the basis of statute law affecting accountants in each of these countries.

### The U.K. Companies Acts

The Companies Acts, written and periodically amended by Parliament, are the oldest sources of U.K. commercial law. While the 1948 re-codification and 1967, 1980, and 1981 amendments of the acts include the most recent and relevant provisions, Companies Act legislation dates from 1848. Common to all U.K. territories, the Companies Acts resemble the U.S. Securities Act of 1933 and the Securities and Exchange Act of 1934. The acts of both nations attempt to establish greater control over corporations and their reporting practices. As early as the nineteenth century, Parliament decided that only legislation would initiate needed improved practices by businesses.

The Companies Acts outline, among other business regulations, general requirements for financial statement content and issuance. In addition, they specify the accounting records firms must maintain to permit a "true and fair" financial representation. Similar to the Securities Act of 1934, the U.K. acts require audited financial statements for all public limited liability companies and an opinion by an independent auditor. Regulation S-X, Article 2 of the U.S. legislation specifies those auditors legally recognized to issue an opinion. Likewise, the Companies Acts identify the appropriate qualified individuals.

Despite these parallels in the general content of the legislation, several differences exist among the more detailed statements. A shareholder in the United Kingdom has no statutory basis for action against accountants for negligent misrepresentation of a prospectus or registration statement. An investor may sue the company, but the Companies Acts allow only actions for fraud against company directors or agents (such as accountants). The plaintiff also must prove reliance on the misstated prospectus and a resulting loss. These elements are in sharp contrast to the Securities Act of 1933. Section 11 grants stockholders broad power to sue anyone involved in the preparation of incorrect registration statements. Neither privity, reliance, deceit, nor loss are relevant defenses, and actions for negligence are permitted against the responsible auditors.

Another example of differences between these statutes is evident upon comparison of Section 10b-5 of the U.S. act with the U.K. Prevention of Fraud (Investments) Act of 1958. The latter U.K. legislation prohibits the use of misleading information to induce actions involving securities and explicitly requires the presence of

scienter (intent to deceive). The U.S. equivalent, more vaguely worded, necessitated a Supreme Court ruling in *Hochfelder v. Ernst & Ernst*[1] to interpret its appropriate limits and requirements.

### THE CANADIAN BUSINESS CORPORATIONS ACT

The Canadian statutory environment remains distinct from that of either the United Kingdom or the United States and thus merits separate consideration. First, a dual system of government forms the basis of Canadian institutions. While the federal level directs and coordinates affairs nationally, ten individual provincial governments also contribute their own guidelines. Businesses may organize under either the federal or provincial system, with the federal regulations generally creating a greater degree of control over the company. While similar in overall content, specific incorporation and filing requirements may differ among these provinces and between them and federal regulations.

Some Companies Acts legislation in Canada, dating from earlier English rule, remains valid or has been appropriately amended; however, the majority of relevant standards exists in more recently enacted commercial statutes. Those companies under federal regulation comply with the Canadian Business Corporations Act of 1975. Like the U.K. Companies Acts, this act contains general laws regarding incorporation and subsequent operation. The prospectus and financial statements accompanied by an independent auditor's report must be filed with the Department of Consumer and Corporate Affairs. Another section requires the maintenance of adequate accounting records. Provincial codes frequently request that similar reports be submitted to the individual governments. Unlike the United Kingdom and the United States, however, the Canadian government does not specifically designate chartered accountants as the only ones authorized to conduct audits.

Throughout accounting practice, in comparison to the United States or United Kingdom, Canada has fewer requirements or restrictions. While the majority of the provinces have established some type of commission to regulate the sale of securities, no agency delegated by the federal government functions in the investigational and enforcement capacity of the U.S. Securities and Exchange Commission.

[1] *Hochfelder v. Ernst & Ernst* (1974), 503 F. 2d 1100.

## COMPARISON OF THE DEVELOPMENT OF COMMON LAW

Although criminal law may also define accountants' responsibilities, civil actions, which occur much more frequently, form the body of accountants' liability under common law. Civil actions encompass both breach of contract and tort claims; however, this section will focus on the most dynamic, relevant, and troublesome area for accountants' legal liability, third-party negligence (i.e., tort) suits.

Common law (i.e., the law and procedures recognized from litigation developments and decisions), has been the driving force in expanding the duties and standards of accountants in all three nations. The early close relationship of the United States with the United Kingdom resulted in initial dependence on their decisions. However, as the U.S. accounting profession developed to an equivalent level, the United Kingdom began to observe U.S. legal proceedings and cite U.S. precedents. Because of both the U.K. dominance and the early absence of an accounting establishment in the United States, Canada initially maintained and followed many elements from U.K. practice. More recently, however, the Canadian accounting profession has begun to observe more frequently events within the United States.

### United Kingdom

The earliest U.K. court decisions concerned the specific duties of auditors, not definitions of the degrees of responsibility and care owed by the accountant. The first significant case addressing the extent of duty was *Derry v. Peek*[2] in 1889. The shareholder, Derry, having no contract with the directors responsible for the registration issuance, brought an action for fraud. Because (1) the incorrect statements resulted only in financial loss, as distinguished from physical damage, and (2) the lack of privity of contract between the parties, only an action alleging deceit in fraud was permitted. Fraud as distinguished from negligence generally includes an intent to deceive. In negligence, the defendant believes in the assertions with misrepresentation resulting only from carelessness. The finding in *Derry v. Peek* disallowed third-party negligence suits and further reinforced the doctrine that a greater duty of care under circumstances of potential physical harm as opposed to economic or financial loss existed.

A subsequent case in 1893 explicitly reinforced the premise advanced in *Derry v. Peek.* Although not involving accountants, the case of *Le Lievre v. Gould*[3] focused on the incorrect certification of

[2] *Derry v. Peek* (1889), 14 A.C. 337.
[3] *Le Lievre v. Gould* (1893), 1 Q.B. 491.

an architect. The plaintiff relied on the architect's incorrect statement of the stage of completed construction to collect mortgage payments and in turn pay the builder. Again, the court refused to allow a suit for negligence in the absence of a duty of care. In addition to the lack of a contract and only economic damage, a further distinguishing element was disclosed. Similar to the physical/pecuniary distinction, negligence via written statements was thought neither equivalent to nor as foreseeable as the careless use of lethal items. Lord Justice Bowen summarized the law at that time,

> . . . it does not consider that what a man writes on paper is like a gun or other dangerous instrument, and, unless he intended to deceive, the law does not, in the absence of contract, hold him responsible for drawing his certificate carelessly.[4]

In 1914, however, the case of *Nocton v. Ashburton*[5] extended the boundary of claims to include actions for negligence where situations revealed a clear duty to be careful. While supporting *Derry v. Peek,* the Lords were of the opinion that where a special relationship exists, suits for negligence may be brought by third parties. Thus, *Derry v. Peek* could no longer be used to limit arbitrarily the scope of suits.

Meanwhile, in the United States, third-party recovery was being expanded for physical loss in 1916 with *MacPherson v. Buick,*[6] a product liability case, and to include financial loss in 1922 in *Glanzer v. Shepherd,*[7] involving an incorrect certificate of weight. Applying the criteria of a foreseen third party likely to be affected (known reliance), the U.S. courts further extended the law for negligence. The *Ultramares*[8] decision in 1931 subsequently checked the expansion of duty to third parties, although some inroads into the physical/economic distinction had occurred and third-party actions for negligence were still permissible in cases of physical damage.

In the United Kingdom, however, except for circumstances revealing a special duty (per *Nocton v. Ashburton*), third-party actions continued to be limited to fraud. In 1932, however, in *Donoghue v. Stevenson,*[9] the United Kingdom departed from its established

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[4] Ibid.
[5] *Nocton v. Lord Ashburton* (1914), A.C. 932.
[6] *MacPherson v. Buick Motor Co.* (1916), 217 N.Y. 382.
[7] *Glanzer v. Shepherd* (1922), 233 N.Y. 236.
[8] *Ultramares Corporation v. Touche et al.* (1931), 255 N.Y. 170.
[9] *Donoghue v. Stevenson* (1932), A.C. 562.

doctrines and moved to the doctrine that had been applied in the United States in 1916 in *MacPherson.* Similar to *Nocton,* the *Donoghue* case established that duty may exist without privity. In this product-liability case (a decomposed snail in a bottle of beer), the consumer claimed physical harm due to the negligent actions of the manufacturer. Lord Atkin cited foresight as the appropriate test and on the basis of a special relationship found a duty of care did exist to persons who are closely and directly affected by an act. Thus, inroads into the privity doctrine similar to those already occurring in the United States began to be introduced in the United Kingdom.

The next influential case within the United Kingdom was *Candler v. Crane, Christmas and Company*[10] in 1951. The lasting implication of this case was not the finding of the court, but rather the dissenting opinion of Denning, one of the judges. The plaintiff, relying on negligently prepared statements, invested in a company which subsequently went into liquidation. He sued the responsible firm of accountants for negligent performance. The court held no duty existed due to the lack of privity and thus denied a third-party recovery. Applying the decision in *Le Lievre v. Gould,* the majority opinion returned to the half-century old doctrine established in *Derry v. Peek.*

Lord Denning's minority opinion, in this case, however, was to lead to a theory of third-party liability to be followed in the future. First, he believed *Donoghue* supported his view. This case had allowed third-party negligence actions in certain circumstances. Also, actions for negligent statements were permissible per *Nocton.* Although Denning was not able to cite any precedents to extend third-party negligence to financial loss, he was convinced the distinction lacked any logic. Seeking to expand on this duty of care, Denning reasoned that those possessing a skill, such as an accountant/auditor, owe a duty to those they know will use the product (in this case the statements) to make decisions. Thus, actual knowledge of the *users* (test of proximity), along with knowledge of the *uses,* is necessary to establish duty outside a contractual relationship. His argument recognized that the independent accounting profession existed due to third-party confident reliance.

I think the law would fail to serve the best interests of the community if it should hold that accountants and auditors owe a duty to no one but their client . . . accountants owe a duty of care not only to their own

[10] *Candler v. Crane, Christmas & Company* (1951), 2 K.B. 164.

clients, but also to all those whom they know will rely on their accounts in the transactions for which those accounts are prepared.[11]

The majority decision in *Candler v. Crane* had relied on a 1893 case and ignored later opposing precedents. Twelve years later, the U.K. courts overruled *Candler* and began to move again toward more similarity with U.S. decisions.

The current landmark case, *Hedley Byrne & Co. Ltd. v. Heller & Partners Ltd.*,[12] established in the United Kingdom an extension of due care and liability. In response to a request for an opinion on the financial health of a business, a group of bankers, Heller & Partners, confirmed the company's good position. The plaintiffs, relying on this assertion, accepted the business' credit. When the business subsequently went into liquidation, Hedley Byrne sued for negligence.

Although the courts in the United Kingdom had never permitted third-party recovery for financial damage in a negligence action, the plaintiff's counsel argued that the existence of a special relationship should allow recovery for economic loss. They cited several U.S. cases including *Glanzer.* While the plaintiffs discussed *Donoghue* and attempted to extend the decision, the defendants relied on the same case to demonstrate that no relationship of proximity existed; the latter was created only under circumstances of physical damage.

Again, the House of Lords, following the principle of *stare decisis,* extensively analyzed prior major case decisions. Unlike *Candler,* this court recognized *Nocton v. Ashburton* in order to permit the third-party negligence action. In addition, the Lords finally dissolved the physical/economic distinction.

The Lords also reviewed Lord Denning's dissenting opinion in *Candler* in order to discuss proximity and duty. Based on these elements as defined by Denning, all five Lords agreed that a relationship of proximity between Hedley and Heller did exist and thus the defendant had owed a duty of care in supplying requested information. Although they discussed *Donoghue,* the Lords' ruling did not include the "reasonable foresight" criteria. Instead, they chose to limit the liability to situations of known third-party reliance.

Although the House of Lords believed the bankers had negligently supplied information and a duty of care would have been established, a disclaimer of responsibility by the bankers eliminated

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[11] Ibid.

[12] *Hedley Byrne & Co. Ltd. v. Heller & Partners Ltd.* (1964), A.C. 465.

any liability. However, the opinion did establish some important legal doctrines. *Hedley Byrne* had (four decades later) matched the U.S. ruling in *Glanzer* and finally eliminated the physical/economic barrier dismissed much earlier in the United States.

Despite its immediate impact, the anxiety created by *Hedley Byrne* did not materialize into the feared increase in liability suits. Only recently in the United Kingdom did the topic again explode. In a 1977 case, *Anns v. London Borough of Merton,*[13] the courts reintroduced the test of "reasonable foresight," initially formulated in *Donoghue.* Whereas the latter case concerned physical loss, *Anns* was the first to apply this principle to the possibility of financial recovery. Although the case did not involve an accounting firm, it established a precedent subsequently applicable to the accountant's professional liability. The plaintiff argued that the local council inspected a block of flats without due care. Not only did the Lords apply the foresight doctrine, but Lord Wilberforce discussed an additional new element. He believed cases should be considered on their particular circumstances with less emphasis on the application of a specific test or necessary criteria. After establishing that a sufficient degree of proximity exists to warrant a duty, the courts should then carefully consider the specific facts to decide the appropriate scope of that duty, he argued.

In a 1981 case against an accounting firm, the judges applied the very principles discussed in *Anns.* In *Jeb Fasteners Ltd. v. Marks, Bloom & Co.,*[14] the plaintiff company took over another company based on the latter's financial statements. The defendant auditors did not know of the intended reliance of the plaintiff and thus argued (per *Hedley Byrne*) that no duty of care existed. The courts reasoned that the accountants should have reasonably foreseen the company's need for financial aid and therefore the probable entrance of a third party.

Justice Woolf, in analyzing the facts, followed the recommendation of *Anns.* There was no "special relationship" existing as Marks, Bloom & Co. did not actually know of the future reliance. However, by applying the foresight test, a duty of care did exist. The special relationship criteria were thus no longer the relevant test. He explained,

> . . . [the auditors] ought to have realised the accounts could be relied on. . . . When he audited the accounts, Mr. Marks would not know precisely who would provide the financial support, or what form the

[13] *Anns v. London Borough of Merton* (1978), A.C. 728.
[14] *Jeb Fasteners Ltd. v. Marks, Bloom & Co.* (1981), 3 All ER 289.

financial support would take. . . . However, . . . it does not seem to me that it would be right to exclude the duty of care merely because it was not possible to say with precision what machinery would be used to achieve the necessary financial support. . . .[15]

*Jeb Fasteners* also was decided employing a broad principle to the specific case circumstances, thereby continuing the trend initiated in *Anns*. The plaintiffs ultimately failed to secure a favorable judgment, however, since it was established that a correct set of financial statements would not have changed their actions.

These recent opinions have implemented the reasoning expressed in dissent by Denning in *Candler*. The U.K. courts now recognize that reliance is the basis of the accounting profession and that the primary purpose of independence is for third-party assurance.

Exhibit 2 summarizes the facts, findings, and implications of the major cases affecting the evolution of accountants' legal liability in the United Kingdom from the late nineteenth century to the present.

### Canada

Because Canada remained until recently a member of the U.K. Commonwealth, court decisions have relied extensively on the cases and opinions from the United Kingdom. Since *Hedley Byrne*, numerous Canadian cases involving different forms of alleged negligent representation have repeated this famous opinion. In 1964, the case of *Dodds and Dodds v. Millman*,[16] concerning a misrepresentation by a real estate agent, found that despite a lack of contract, the relationship between the agent and plaintiff purchasers established a duty owed by the agent. This parallels the reasoning employed since *Nocton v. Ashburton*, particularly in *Hedley Byrne* in the United Kingdom and *Glanzer v. Shepherd* in the United States.

An often cited auditing case heard in the Supreme Court of Canada in 1977 is *Haig v. Bamford*.[17] As in many third-party actions, the plaintiff relied on incorrect financial statements and subsequently lost his investment. Like the 1977 U.K. case of *Anns v. London Borough of Merton*, this case helped to extinguish the physical/economic distinction in Canada and applied the same test formulated in *Hedley Byrne*. Believing the foreseeability test to be unnecessary and knowledge of the specific investor or class to be too

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[15] Ibid.

[16] *Dodds and Dodds v. Millman* (1964), 45 D.L.R. 2d 472.

[17] *Haig v. Bamford* (1977), 1 S.C.R. 466.

**Exhibit 2. The Evolution of Auditor Liability to Third Parties in the United Kingdom**

| Case | Findings | Implications |
|---|---|---|
| *Le Lievre v. Gould* (1893) | Refused a suit for negligence in the absence of a contract and only economic damage. | Disallowed third-party negligence suits. |
| | Negligence via written statements is neither equivalent to nor as foreseeable as careless use of lethal items. | |
| *Nocton v. Ashburton* (1914) | Extended the boundary of claims to include actions for negligence where situations revealed a clear duty to be careful. | Conceivable that in specific, closely defined circumstances, third-party suits for negligence could be sustained. |
| *Donoghue v. Stevenson* (1932) | Duty may exist without privity; decision cited foresight as the appropriate test. | Attempt at defining circumstances of third-party suits for negligence. |
| *Hedley Byrne & Co. Ltd. v. Heller & Partners Ltd.* (1964) | Dissolved the physical/economic distinction. | Extended liability to situations of known third-party reliance. |
| | Recognized *Nocton v. Ashburton* in order to permit third-party negligence action. | American Law Institute Second Restatement of Torts incorporated a broadened position of liability. |
| *Jeb Fasteners Ltd. v. Marks, Bloom & Co.* (1981) | Auditors need not know of intended reliance, but should have foreseen probable entrance of a third party. | Extended liability to situations of foreseeable third-party reliance. |

narrow, the Court concluded that because the auditors knew or should have known the limited class of third party users, a duty of care did exist.

The limits of this responsibility, however, remain uncertain. In

a 1979 case in Quebec, *Albert Dupuis v. Pan American Mines Ltd. et al.*,[18] caused a new wave of anxiety among its observers. Alleging a mistaken prospectus, Dupuis initially sued Pan Am, its directors, lawyers, and accountants, and others for the loss of his shares upon the removal of Pan Am shares from the Exchange list. The plaintiff's case was actually only tried against the lawyers and accountants who prepared the issued prospectus. The trial judge determined the auditors were negligent and commented, ". . . I believe he [the auditor] has a duty to make sure that the contents of that balance sheet are accurate so that the prospective investors will not be led into error by it."[19] This decision extended duty beyond a limited class (*Haig v. Bamford*) to all prospective investors. On appeal, the Supreme Court of Quebec upheld the decision. As this case concerned a prospectus (unlike *Haig*), its ultimate effect on the scope of auditor responsibilities is still uncertain. However, it does appear to approximate the extent of liability implied within the Securities Act of 1933 of the United States.

A very recent case also illustrates the nearly equivalent degree of legal liability development between Canada and the United Kingdom. In March 1985, the Superior Court of the Province of Quebec decided *Retallack v. Maheux et al.*,[20] a case similar to *Jeb Fasteners.* To support a potential merger, the defendant accountants prepared audited financial statements. The judge agreed the auditors performed negligently and that they

> . . . may be liable toward third parties who rely upon erroneous financial statements negligently prepared by them from the principle established in the well-known English case of *Hedley Byrne & Co. Ltd. v. Heller & Partners Ltd.* That principle has been widely accepted in Canada. . . .[21]

Although a duty existed and a breach of that duty occurred, the judge nevertheless concluded that the causal link was not sufficiently established. The plaintiff's actions toward proceeding with the acquisition despite the apparent uncertain financial position of the target company led the judge to question any reasonable reliance on the prepared financial statements. Nonetheless, the principle had been established.

Exhibit 3 presents a summary of the facts, findings, and implications of the major cases affecting the evolution of accountants' legal liability in Canada from *Hedley Bryne* to the present.

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[18] *Albert Dupuis v. Pan American Mines* (1979).
[19] Ibid.
[20] *Retallack v. Maheux et al.* (1985).
[21] Ibid.

**Exhibit 3. The Evolution of Auditor Liability to Third Parties in Canada**

| Case | Findings | Implications |
|---|---|---|
| *Dodds and Dodds v. Millman* (1964) | Despite a lack of contract, the relationship established a duty owed by an agent. | Parallels *Hedley Byrne* in the United Kingdom and *Glanzer v. Shepherd* in the United States. |
| *Haig v. Bamford* (1977) | Extinguished the physical/economic distinction.<br>Applied the same test formulated in *Hedley Byrne.* | A duty of care did exist to third-party users that the auditors knew or should have known would use the statements. |
| *Albert Dupuis v. Pan American Mines Ltd. et al.* (1979) | Determined the auditors' duty to include the assurance that the balance sheet is accurate so that prospective investors will not be misled. | Decision extends beyond a limited class (*Haig v. Bamford*) to all prospective investors.<br>Approximates the extent of liability implied within the Securities Act of 1933 of the United States. |
| *Retallack v. Maheux et al.* (1985) | Auditors may be liable toward third parties who rely upon erroneous financial statements negligently prepared by them. | Nearly equivalent degree of legal liability development between Canada and the United Kingdom. |

## CONCLUSIONS

Gradually, the accounting professions in both the United Kingdom and Canada have experienced an increased scope of responsibility and expanding legal liability. The U.S. experience is, therefore, not entirely unique. However, only the accounting profession in the United States has encountered an actual litigation explosion of threatening proportions. Reasons for this are certainly traceable to societal differences and differences in the legal environments of the three countries. At least two additional factors appear to aggravate this variance among the nations. First, a considerable

number of suits tend to foster a greater environment of uncertainty. Second, a proliferation of cases combined with inconsistent applications of the law among the courts has resulted in an inevitable expansion of liability. Only rarely has a court restricted a duty established by prior cases in another court. Rather, new circumstances and arguments have tended to cause extensions of liability beyond existing precedents.

What is the likelihood of U.S. experiences being repeated in the United Kingdom and Canada? Based on common law, an increase in auditors' liability seems likely to evolve. Since *Hedley Byrne,* U.K. and Canadian court opinions have relied less on precedents with established strict definitions and tests. The trend is to judge cases more on their own merits while questioning the state of the law. This has lead to differing interpretations in various courts and thus less consistency and certainty than these countries have experienced in the past. As parties to a disagreement attempt to resolve some of this uncertainty, greater reliance on the courts now exists in all three nations. The inevitable consequence of this dependence may be an extension of the limits of accountants' duties.

The worldwide demands for increased accountability among institutions and professions will also likely influence further expansion of liability in the United Kingdom and Canada. Amended professional codes and commercial laws all reflect current awareness of this trend. Appropriate statutes can best define legal requirements and expectations, but actions through the courts will ultimately test and apply an increased level of responsibility. Observation of U.S. events and developments will also considerably impact the course of activities within the United Kingdom and Canada.

The pace of change in accountants' legal liability has differed among the three countries, and the U.S. public accounting profession will probably continue to be involved in the greatest volume of litigation. Because the primary differences among the countries are those of the legal environment, the extent of litigation in the United States will probably not be matched in the United Kingdom or Canada. However, increased understanding of the strengths and weaknesses of the legal and accounting institutions of these other countries generates the basis for an assessment of the U.S. legal system and accounting profession and, perhaps, the impetus for positive change in both.

## BIBILOGRAPHY


Causey, Denzil, Jr. *Duties and Liabilities of Public Accountants.* Homewood, Ill.: Dow Jones-Irwin, Inc., 1982.

Chandler, Roy. "Auditors' Liability — Recent Developments." *Accountant* (12 January 1984), 3–5.

Council of the Institute of Chartered Accountants in England and Wales. "Professional Liability of Accountants and Auditors." *Accountancy* (January 1984), 120–23.

Davison, A. G. "Current Events Affecting Auditors in the United States and Canada — Possible Relevance to Australia." *Chartered Accountant in Australia* (August 1978), 19–24.

Dickerson, Robert W. V. "From One Reversal to Another." *CA Magazine* (August 1976), 67–68.

———. *Accountants and the Law of Negligence.* New York: Garland Publishing, Inc., 1982.

Johnston, Donald J., W. Morley Lemon, and Frederick L. Neumann. "The Canadian Study of the Role of the Author." *Journal of Accounting, Auditing & Finance* (Spring 1980), 251–63.

Keenan, Denis. "Professional Negligence Up-to-Date." *Accountancy* (February 1983), 62–64.

Minnis, E. P., and C. W. Nobes. *Accountants' Liability in the 1980s: An International View.* London: Croom Helm, 1985.

Pockson, Jonathon R. H. H. *Accountants' Professional Negligence.* New York: Holmes & Meier Publishers, 1982.

Powell, John L., and R. M. Jackson. "Third Party Liability." *Accountant* (5 August 1982), 8–9.

Price Waterhouse. *Doing Business in Canada.* New York: Price Waterhouse, 1979.

Rowan, Hugh. "Third Party Liability Extended?" *CA Magazine* (August 1979), 78, 80–82.

———. "Professional Negligence in England and Wales — Part 1." *CA Magazine* (April 1984), 54, 56.

———. "Professional Negligence in England and Wales — Part 2." *CA Magazine* (June 1984), 57–58, 60.

———. "Blaming the Auditors: Easier Tried Than Won." *CA Magazine* (August 1985), 87, 90–91.

Sherman, Jeffrey D. "Third-Party Liability: Part 1 — Where Will It End?" *CA Magazine* (July 1983), 70–71.

# *Welfare of the Common Man and Accounting Disclosure Adequacy: An Empirical Investigation*

AHMED BELKAOUI and MOSTAFA MAKSY*

Comparative accounting literature cites the possibility of classifying certain patterns in the world of accounting into different historical "zones of accounting influences."[1] As a result, various attempts were made to identify the environmental variables likely to explain the grouping of countries in these zones of accounting influences. Most of the early attempts focused on cultural, social, and economic factors as possible explanatory variables of the differences in accounting principles and techniques among the various countries. The results were generally supportive of the hypothesis that the cultural and economic environment in a country influences its accounting principles and reporting practices.[2] More recent studies have attempted to relate these differences to the economic and

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[1] Gerhard G. Mueller, *International Accounting* (New York: Macmillan, 1967), and "Accounting Principles Generally Accepted in the United States versus Those Generally Accepted Elsewhere," *International Journal of Accounting* (Spring 1968), 91–103; American Accounting Association, "Report of the American Accounting Association Committee on International Accounting Operations and Education," *Accounting Review* (1977 Supplement), 65–101; and R. C. DaCosta, J. C. Burgeois, and W. M. Lawson, "A Classification of International Financial Accounting Practices," *International Journal of Accounting* (Spring 1978), 92–102.

[2] W. G. Frank, "An Empirical Analysis of International Accounting Principles," *Journal of Accounting Research* (Autumn 1979), 595–605; and R. D. Nair and W. G. Frank, "The Impact on Disclosure and Measurement Practices on International Accounting Classifications," *Accounting Review* (July 1980), 426–50, and "The Harmonization of International Accounting Standards," *International Journal of Accounting* (Fall 1981), 61–77.

political environment of each country.[3] The results were far from conclusive.

Basically, the empirical literature on the determinants of differences in the reporting and disclosure adequacy among countries can be grouped into two types. The first type focuses on indices of economic and social welfare as possible explanatory variables, and the second focuses on political and civil welfare. What is missing in both types of studies is the welfare of the common man and how that welfare may affect the determination of accounting principles in a given country. The welfare of the common man, as introduced in the social economics literature, is defined as the extent to which economic welfare is translated into achievement in social welfare or "basic welfare" (to use the social economics terminology).[4] Two important questions are open to empirical examination in the comparative accounting literature. First, how do countries of different economic systems rate as to the welfare of the common man? Second, are the actual accounting reporting and disclosure adequacy of a given country related to the welfare of the common man? The objective of this study is to investigate these questions.

## ELEMENTS INFLUENCING THE DEVELOPMENT OF ACCOUNTING

In most comparative empirical accounting research, the development of accounting is viewed in terms of the development of an adequate reporting and disclosure tradition. Therefore, in attempting to identify the elements influencing the development of accounting, this study considers a reporting and disclosure index as the representative of the state of accounting development in a given country.[5] If we view this reporting and disclosure index as an expression of social behavior, we may hypothesize that the index

[3] Ahmed Belkaoui, "Economic, Political, and Civil Indicators and Reporting and Disclosure Adequacy: Empirical Investigation," *Journal of Accounting and Public Policy* (Fall 1983), 207–20; and P. S. Goodrich, "Accounting and Political Systems," Discussion Paper No. 109, School of Economic Studies, University of Leeds, England (1982).

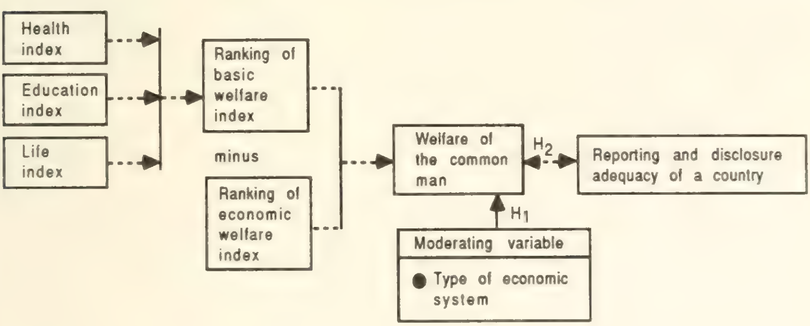
[4] B. Horvat, "Welfare of the Common Man in Various Countries," *World Development* (July 1974), 29–39; J. R. Mandle, "Basic Needs and Economic Systems," *Review of Social Economy* (October 1980), 179–89; and K. N. Hella, "Basic Needs and Economic Systems: Notes on Data, Methodology, and Interpretation," *Review of Social Economy* (October 1983), 172–77.

[5] Mueller takes the other viewpoint and calls for a study of the factors and variables which produce an efficient and effective public accounting profession and the possible construction of "professional accounting development index." See Gerhard G. Mueller, "The State of the Art of Academic Research in Multinational Accounting," *Canadian Chartered Accountant* (February 1977).

is a direct product of its environment, based on a well-accepted thesis in sociology that social structure determines social behavior.[6] Although this environment was defined as either the economic and social environment in some studies[7] or the political and civil environment in other studies,[8] this study views the environment as the welfare of the common man, a combination of economic and social environments.

Therefore, the index, as shown in Exhibit 1, may then be represented as being influenced by the welfare of the common man in a given country. The welfare of the common man is shown as the difference between the rankings of the economic welfare index and the basic welfare index. The basic welfare index itself is a composite of three indices: a health index, an education index, and a life index. Notice that the welfare of the common man is

**Exhibit 1. Model of Accounting Development**




[6] This thesis derives from the sociological paradigm of structural functionalism which holds that structural determinants (i.e., social facts) constitute the primary methodological foci for explanation of social behavior. The classical statement of this method can be found in E. Durkheim, *The Division of Labor in Society*, trans. G. Simpson (New York: Macmillan, 1933), and *The Rules of Sociological Method*, trans. S. S. Solovay and J. H. Mueller, ed. G. E. G. Catin (New York: Free Press, 1964), and more contemporary discussions can be found in T. Parsons, *The System of Modern Societies* (Englewood Cliffs, N.J.: Prentice-Hall, 1971), and G. Ritzer, *Sociology: A Multiple Paradigm Science* (Boston, Mass.: Allyn and Bacon, 1975).

[7] Frank, "Empirical Analysis"; Frederick D. S. Choi and Gerhard G. Mueller, *An Introduction to Multinational Accounting* (Englewood Cliffs, N.J.: Prentice-Hall, 1978); and Lee J. Seidler, "International Accounting — The Ultimate Theory Course," *Accounting Review* (October 1967), 775–81.

[8] Belkaoui, "Empirical Investigation," *Socioeconomic Accounting* (Westport, Conn.: Greenwood Press, 1984), and *International Accounting* (Westport, Conn.: Greenwood Press, 1985).

assumed to be moderated by the type of economic system adopted by the given country. All these variables and the hypothesized relationships will now be examined.

### Welfare of the Common Man and Determinants

The concept of the welfare of the common man originated when development economists turned their attention from economic growth per se to the issue of the "basic needs" of the population. Basically, the development approach moved from a largely economic perspective to a wider, all-encompassing socioeconomic one aimed at the fulfillment of all basic needs: adequate nutrition, health, clean water, and shelter.[9] This strategy views development in terms of the fulfillment of basic needs, which have been eloquently defined by Ul Haq as follows:

> The concepts of basic needs bring to any development strategy a heightened concern with meeting the consumption needs of the whole population, particularly in the areas of education and health, but also in nutrition, housing, water supply, and sanitation. In formulating policies aimed at reducing poverty, a good deal of attention has generally been paid to restructuring the patterns of production and income so that they benefit the poor. But similar attention has not been devoted to their needs for public services.[10]

Morawetz identified sixteen indices of basic human needs, covering such essentials as three on nutrition, six on health, three on housing, and four on education. In doing so, he noted that "the ultimate goal is provision to the poor of the goods and services required to fulfill their basic needs: food, health care, shelter and the like."[11] His attempt to relate these variables to economic development as measured by per capita output resulted in a statistically significant relationship for only five of the sixteen variables. He gloomily concluded that "GNP per capita and its growth rate do not seem to provide satisfactory proxies for fulfillment of basic needs and improvements in the same."[12] His efforts were continued by Horvat, who compared the per capita output ranking of sixty countries with a composite ranking of social indicators.[13] He was able to evaluate the relative success a country achieved in satisfying basic needs compared to other countries.

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[9] Belkaoui, *Socioeconomic Accounting.*

[10] M. Ul Haq, "An International Perspective on Basic Needs," in World Bank, *Poverty and Basic Needs* (September 1980), 32.

[11] D. Morawetz, *Twenty-Five Years of Economic Development: 1950-1975* (Washington, D.C.: World Bank, 1977), 14.

[12] Ibid., 55–58.

[13] Horvat, "Welfare of the Common Man."

Where the basic welfare ranking is worse than the economic welfare ranking, he stated that the common man is not treated as well as elsewhere. Where, however, the basic welfare ranking is better than the economic welfare ranking, the country is assumed to be efficiently employing its resources to satisfy the welfare needs of its population.[14] The welfare of the common man was operationally defined as the difference between the ranking of the economic welfare (measured by GNP) and the ranking of the basic welfare (a composite ranking of three indices on health, life, and education). Hovart found that the countries of the socialist block, the countries he labeled as "etatist," achieved "unambiguously higher basic welfare than other countries."[15] He also found that the countries with a long welfare or social tradition fared better than capitalist countries, where such a tradition was less popular. Horvat, however, acknowledged that the welfare ranking of the high income countries is biased downward and the welfare status of the poor countries may be biased upward, which may explain his results. To try to correct for this bias and to determine whether it influenced Horvat's conclusion, Mandle replicated the study and eliminated both the richest and the poorest countries. He failed, however, to reject Horvat's findings. His general and rather "political" conclusion stated:

> It is thus that Marx may well turn out to be right. Capitalism does appear to be capable of generating long-term growth. What it may not be competent to achieve is development while alleviating the poverty of the bulk of the population. Furthermore, the evidence suggests that the institutional structure of the "etatist" countries is favorably organized to accomplish both.[16]

This debate will surely continue. In effect, Hella examined some questions concerning data, methodology, and interpretation in both Horvat's and Mandle's papers, but failed to reject their conclusions.[17] One aspect of this study will be an attempt to replicate and verify Hovart's conclusion using more recent data. Horvat's data covers the period 1960 to 1976. The replication may be justified by the fact that during the seventies and following the turbulent sixties, the "so-called" capitalist countries have moved more aggressively to provide various forms of social welfare and "safety nets" to individuals. The first hypothesis to be tested is as follows:

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[14] Ibid., 31.
[15] Ibid., 32.
[16] Mandle, "Basic Needs," 189.
[17] Hella, "Basic Needs."

$H_1$: There is no difference in the levels of the welfare of the common man between countries adopting different economic systems.

Basically, if the welfare of the common man is to be defined as the difference between the ranking of the economic welfare and the ranking of the basic welfare, we may easily assume that the type of economic system will have an impact on both the economic welfare and the social welfare and henceforth on the welfare of the common man.

### Welfare of the Common Man and Reporting and Disclosure Adequacy

Earlier studies in the comparative accounting literature examining the determinants of reporting and disclosure adequacy found either little significance with various expressions of economic and social welfare and/or no significance with political welfare. The reason may be that the choice of determinants may have failed to include the combined effect of these determinants. As noted earlier, the combined effect of economic welfare and social or basic welfare is the concept of the welfare of man. The higher the welfare of man, the better the conditions for the creation of an accounting profession and tradition based on full and fair disclosure. Where the basic welfare ranking is worse than the economic welfare, the common man may not be treated as well as elsewhere, and the reporting and disclosure adequacy of a given nation will suffer equally. Where, however, the basic welfare ranking is better than the economic welfare ranking, the country may be assumed to be efficiently employing its physical and human resources to satisfy the welfare needs of its population, and the reporting and disclosure adequacy will be better than where the conditions are worse. Therefore, the second hypothesis to be tested is as follows:

$H_2$: There is no difference between the reporting and disclosure adequacy of a country and the level of the welfare of man.

## PROCEDURES

### Methodology and Sample

As presented in Exhibit 1, the study investigates the relationships between two main variables: the welfare of the common man and an accounting reporting and disclosure adequacy index. The moderating variable is the type of economic system. First, each of these variables is explained and measured. Second, various correlation statistics are computed to test the two hypotheses.

All the countries listed in the World Bank's *World Development Report 1981,* which amounted to 124 countries, were included in this study. They are listed in Exhibit 2.

**Reporting and Disclosure Adequacy Index**

Adequacy refers to the coverage of events and transactions in the financial statements. A financial statement is considered adequate if all the relevant information has been reported and disclosed. The measurement of actual adequacy is then determined quantitatively as the extent of coverage of relevant information. The same approach is used here to compute an actual disclosure index for a country. The first requirement was to select a set of reporting and disclosure practices on which countries were likely to differ. Price Waterhouse's *International Survey of Accounting Principles and Reporting Practices* provides such a data base.[18] It indicates for each of 267 accounting principles and practices the extent of application in each country in terms of a seven-fold classification: (1) required, (2) insisted upon, (3) predominant practice, (4) minority practice, (5) rarely or not found, (6) not accepted, or (7) not permitted. In this study, each of the seven classifications are coded as follows:

| Classifications | Scale for the extent of application |
|---|---|
| 1 = required | 7 |
| 2 = insisted upon | 6 |
| 3 = predominant practice | 5 |
| 4 = minority practice | 4 |
| 5 = rarely or not found | 3 |
| 6 = not accepted | 2 |
| 7 = not permitted | 1 |

The scale for the extent of application of each of the 267 accounting principles and reporting practices constituted a separate observation for each of forty-eight countries surveyed by Price Waterhouse. The sum of these observations per country is used as the actual reporting and disclosure adequacy index.

A high score on the "actual reporting and disclosure adequacy index" suggests a willingness by a given country to adhere to and enforce 267 accounting principles and practices deemed necessary for enhancing the quality of accounting practice and helping to move toward a greater degree of harmonization.[19] That differences

[18] Price Waterhouse International, *International Survey of Accounting Principles and Reporting Practices* (Scarborough, U.K.: Butterworths, 1979).
[19] Ibid., 3.

**Exhibit 2.**

Low-Income Countries

| | | |
|---|---|---|
| 1. Kampuchea, Dem. | 13. Burundi | 25. Tanzania |
| 2. Laos PDR | 14. Upper Volta | 26. Zaire |
| 3. Bhutan | 15. India | 27. Niger |
| 4. Bangladesh | 16. Malawi | 28. Guinea |
| 5. Chad | 17. Rwanda | 29. Central African Rep. |
| 6. Ethiopia | 18. Sri Lanka | 30. Madagascar |
| 7. Nepal | 19. Benin | 31. Uganda |
| 8. Somalia | 20. Mozambique | 32. Mauritania |
| 9. Mali | 21. Sierra Leone | 33. Lesotho |
| 10. Burma | 22. China | 34. Togo |
| 11. Afghanistan | 23. Haiti | 35. Indonesia |
| 12. Viet Nam | 24. Pakistan | 36. Sudan |

Middle-Income Countries

| | | |
|---|---|---|
| 37. Kenya | 57. Peru | 77. Korea, Rep. of |
| 38. Ghana | 58. Morocco | 78. Algeria |
| 39. Yemen Arab Rep. | 59. Mongolia | 79. Mexico |
| 40. Senegal | 60. Albania | 80. Chile |
| 41. Angola | 61. Dominican Rep. | 81. South Africa |
| 42. Zimbabwe | 62. Colombia | 82. Brazil |
| 43. Egypt | 63. Guatemala | 83. Costa Rica |
| 44. Yemen, PDR | 64. Syrian Arab Rep. | 84. Rumania |
| 45. Liberia | 65. Ivory Coast | 85. Uruguay |
| 46. Zambia | 66. Ecuador | 86. Iran |
| 47. Honduras | 67. Paraguay | 87. Portugal |
| 48. Bolivia | 68. Tunisia | 88. Argentina |
| 49. Cameroon | 69. Korea, Dem. Rep. | 89. Yugoslavia |
| 50. Thailand | 70. Jordan | 90. Venezuela |
| 51. Philippines | 71. Lebanon | 91. Trinidad & Tobago |
| 52. Congo, People's Rep. | 72. Jamaica | 92. Hong Kong |
| 53. Nicaragua | 73. Turkey | 93. Singapore |
| 54. Papua New Guinea | 74. Malaysia | 94. Greece |
| 55. El Salvador | 75. Panama | 95. Israel |
| 56. Nigeria | 76. Cuba | 96. Spain |

Industrial Market Economies

| | | |
|---|---|---|
| 97. Ireland | 103. Japan | 109. Norway |
| 98. Italy | 104. Australia | 110. Belgium |
| 99. New Zeland | 105. Canada | 111. Germany, Fed. Rep. |
| 100. United Kingdom | 106. France | 112. Denmark |
| 101. Finland | 107. Netherlands | 113. Sweden |
| 102. Austria | 108. United States | 114. Switzerland |

Capital-Surplus Oil Exporters

| | | |
|---|---|---|
| 115. Iraq | 117. Libya | 118. Kuwait |
| 116. Saudi Arabia | | |

Nonmarket Industrial Economies

| | | |
|---|---|---|
| 119. Bulgaria | 121. Hungary | 123. Czechoslovakia |
| 120. Poland | 122. USSR | 124. German Dem. Rep. |

in accounting principles and financial reporting practices exist reflects the level of the welfare of the common man of separate nations and regions, or indicates that a different measure of reporting adequacy is considered appropriate. This study is based on the former interpretation, which is, first, that the conformity with each of the 267 practices and principles by the business community and accountancy profession is a desired goal of each of the countries in the study, and, second, that the degree of conformity depends on the welfare of the common man. That conformity is the desired goal is evident in efforts of various organizations, which include the United Nations Commission on Transnational Corporations, the Organization for Economic Co-operation and Development, the European Economic Community, and the International Accounting Standards Committee, aimed at a greater harmonization of international reporting. That the degree of conformity is a reflection of the welfare of the common man is the subject of this study.

#### Type of Economic Systems

The groupings used by the World Bank were used to differentiate among different economic systems. As presented in Exhibit 1, these were low income countries (thirty-six countries), middle income countries (sixty countries), industrial market economies (eighteen countries), capital surplus oil exporters (four countries), and nonmarket industrial economies (six countries).

#### Welfare of the Common Man

Following earlier studies which are replicated here using more recent data, the welfare of the common man is operationally computed as the difference between the ranking of basic welfare and the ranking of economic welfare.[20] The main assumption in all these studies, including this one, is that if the social ranking is higher (better) than the economic ranking, it means that the given country has achieved higher relative basic welfare for its population than is generally the case in the sample of countries examined.[21]

The detailed procedure for the computation of the determination of the welfare of the common man follows.

First, countries were ranked on the basis of their per capita GNP for 1979 to determine the economic ranking.

Second, three social indicators on health, life, and education of

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[20] Horvat, "Welfare of the Common Man," Mandle, "Basic Needs," and Hella, "Basic Needs."

[21] Horvat, "Welfare of the Common Man," 31.

the previous studies were aggregated into a single one to represent a country's basic welfare. Because there is no objective way of weighing the component indicators, Horvat and Mandle assigned equal weight to the three indicators and computed the aggregate indicator for basic welfare as the average of the three component ranks of life, education, and health.[22] Naturally, there is no mathematical basis for creating an average rank in this way. Hella approached this serious difficulty in Horvat's methodology by calculating a standardized value for each measure of need (health, life, and education), adding the standardized value together and ranking the countries on the basis of the new variable.[23] Hella's methodology was adopted in this study for the computation of the ranking of basic welfare.[24] To choose the measure of need (health, life, and education), the author examined the World Bank's *World Development Report 1981*, which yielded three measures for life, three for health, and four for education, which were available for most of the countries in the World Bank's Survey.

The three measures for life were as follows:

$X_1$ = Life expectancy at birth (years), 1979.
$X_2$ = Crude death rate for thousand population, 1979.
$X_3$ = Child death rate (aged 1-4), 1979.

The three measures for health were these:

$X_4$ = Population per physician, 1977.
$X_5$ = Population per nursing person, 1977.
$X_6$ = Daily per capita calorie supply as percentage of requirement, 1977.

The four measures for education were the following:

$X_7$ = Number enrolled in primary school as percentage of age group, 1978.
$X_8$ = Number enrolled in secondary school as percentage of age group, 1978.
$X_9$ = Number enrolled in higher education as percentage of population aged 20-24, 1977.
$X_{10}$ = Adult literacy rate (percent), 1976.

A combination of these measures of need yielded thirty-six measures of basic welfare, and then these measures were ranked.

[22] Horvat, "Welfare of the Common Man," and Mandle, "Basic Needs."
[23] Hella, "Basic Needs."
[24] Ibid.

Third, the ranking of the economic welfare obtained in step one minus the ranking of each of the thirty-six different measures of basic welfare obtained in step 2 yielded thirty-six different measures of welfare of man for each of the countries.

## EMPIRICAL RESULTS

### Comparative Results on the Welfare of the Common Man: Hypothesis 1

The first hypothesis is intended to investigate the relationships between the welfare of the common man on one hand and the types of economic system adopted by the countries in our sample on the other hand. First, one-way ANOVA with F distribution was used for each of the independent variables, namely type of economic system. Because of the possibilities of non-normal distribution of welfare of man values and inequality of variances, a nonparametric test, the Kruskal-Wallis one-way ANOVA, is also used. The H-statistic is computed as follows:

$$H = \frac{12}{N(N+1)} \sum_{j=1}^{k} \frac{R_j}{n_j} - 3(N+1)$$

where: $k$ = number of categories for each independent variable
$n_j$ = number of countries in the $j^{th}$ category
$N$ = number of countries in the total sample
$R_j$ = Sum of the ranks in $j^{th}$ category.

The values of the H-statistic were compared with the Chi-square critical values to test the hypothesis. The results of the F and $\chi_2$ statistics are shown in Exhibit 3.

According to the information in Exhibit 3, the result for the impact of the type of economic system was significant. Basically, as noted in other related studies, the welfare of the common man is dependent mainly on the type of economic system adopted by the given country.

An examination of the mean welfare of man scores for each of the thirty-six combinations in this study showed the following results for the five types of economic systems:

1. For low income countries, thirty-six of the thirty-six means were positive.
2. For middle income countries, twenty-nine of the thirty-six means were positive.
3. For industrialized market economies, the thirty-six means were negative.

**Exhibit 3. Parametric and Non-Parametric Results**

| Welfare of man | F* | $\chi^2$* | Welfare of man | F | $\chi^2$* |
|---|---|---|---|---|---|
| $W_1$ | 12.43 | 33.65 | $W_{18}$ | 26.51 | 49.95 |
| $W_2$ | 14.57 | 31.35 | $W_{19}$ | 16.13 | 34.36 |
| $W_3$ | 10.87 | 35.27 | $W_{20}$ | 26.60 | 42.51 |
| $W_4$ | 23.63 | 48.45 | $W_{21}$ | 8.48 | 51.33 |
| $W_5$ | 17.58 | 38.32 | $W_{22}$ | 7.73 | 20.17 |
| $W_6$ | 29.43 | 32.70 | $W_{23}$ | 13.45 | 19.29 |
| $W_7$ | 25.49 | 39.33 | $W_{24}$ | 24.43 | 26.59 |
| $W_8$ | 13.35 | 53.86 | $W_{25}$ | 13.87 | 45.26 |
| $W_9$ | 11.87 | 18.89 | $W_{26}$ | 15.39 | 37.40 |
| $W_{10}$ | 21.07 | 18.50 | $W_{27}$ | 26.77 | 32.62 |
| $W_{11}$ | 11.64 | 27.98 | $W_{28}$ | 29.80 | 38.43 |
| $W_{12}$ | 18.08 | 45.08 | $W_{29}$ | 15.47 | 45.97 |
| $W_{13}$ | 28.11 | 49.54 | $W_{30}$ | 12.44 | 43.04 |
| $W_{14}$ | 9.18 | 28.18 | $W_{31}$ | 20.30 | 32.74 |
| $W_{15}$ | 9.00 | 37.73 | $W_{32}$ | 29.33 | 41.69 |
| $W_{16}$ | 15.90 | 48.50 | $W_{33}$ | 10.06 | 52.47 |
| | | | $W_{34}$ | 9.64 | 21.78 |
| | | | $W_{35}$ | 16.69 | 21.61 |
| | | | $W_{36}$ | 25.97 | 29.57 |

* Significant at .0001.

4. For capital surplus oil exporters, the thirty-six means were negative.
5. For the nonmarket industrial economies, the thirty-six means were positive.

From this examination of the mean scores of the welfare of man for the various combinations, the welfare of man appears to fare better in the industrial market economies and capital surplus oil exporters than in the nonmarket industrial economies and low and middle income countries. The results are contrary to other empirical studies investigating the differences in the welfare of man among the various economic systems. The results of this study indicate that the countries labeled as industrial economies and capital surplus oil exporters achieved unambiguously higher basic welfare than other countries.

#### Relationship between Actual Reporting and Disclosure Adequacy and the Welfare of the Common Man

As discussed earlier, hypothesis 2 attempted to test whether a relationship exists between accounting reporting and disclosure adequacy of a country and the level of the welfare of the common man. Because of the lack of accounting data in the Price Waterhouse

survey for some countries in general and the nonmarket industrial economies in particular, we ranked only forty-eight countries from our sample with respect to reporting and disclosure adequacy in a descending order. The new sample is shown in Exhibit 4. The same ranking procedure was applied to each of the thirty-six measures of the welfare of man. We then correlated the ranking or reporting and disclosure adequacy of the thirty-six rankings of the welfare of the common man. Using the Spearman correlation coefficient, only one of the measures of the welfare of man was significant at $\chi$ = .09 (Spearman correlation coefficient was equal to 0.2472). Therefore, with one minor exception, hypothesis 2 cannot be accepted. The main finding is that, with the exception of a weak significant case, the reporting and disclosure adequacy in a given country is not significantly affected by the welfare of man in that country.

## SUMMARY AND CONCLUSION

This study attempted to investigate empirically whether the welfare of the common man has an impact on the development of accounting principles and practices. The welfare of the common

**Exhibit 4. Countries for Which a Disclosure Adequacy Is Available**

| | |
|---|---|
| 1. Argentina | 25. Malaysia |
| 2. Australia | 26. Morocco |
| 3. Austria | 27. Mexico |
| 4. Belgium | 28. Netherlands |
| 5. Bolivia | 29. New Zealand |
| 6. Brazil | 30. Nicaragua |
| 7. Canada | 31. Nigeria |
| 8. Chile | 32. Norway |
| 9. Costa Rica | 33. Pakistan |
| 10. Dominican Republic | 34. Panama |
| 11. Ecuador | 35. Paraguay |
| 12. El Salvador | 36. Peru |
| 13. France | 37. Philippines |
| 14. Germany | 38. Portugal |
| 15. Greece | 39. Singapore |
| 16. Guatemala | 40. Spain |
| 17. Honduras | 41. Sweden |
| 18. India | 42. Switzerland |
| 19. Ireland | 43. United Kingdom |
| 20. Italy | 44. United States |
| 21. Jamaica | 45. Uruguay |
| 22. Japan | 46. Venezuela |
| 23. Kenya | 47. Zaire |
| 24. Malawi | 48. Zambia |

man was defined as the difference between the ranking of economic welfare and the ranking of social welfare in a given country with respect to the countries included in the study sample. As a surrogate for economic welfare, we used per capita GNP. As a surrogate for social welfare, we used three indices: health, life, and education.

The development of accounting principles and practices is represented by a reporting and disclosure adequacy index composed of 267 accounting principles and practices and the extent of their application in forty-eight countries.

We first tested whether the welfare of the common man as defined is influenced or moderated by the type of economic system. We found that the economic system affects the welfare of the common man. We then tested the relationship between the welfare of the common man and the development of accounting principles and practices.

We found that no statistically significant relationship exists between the welfare of the common man and the development of accounting principles and practices.

Our second result is, however, subject to at least two limitations.

First, the reduction of our original sample from 124 to 48 countries and the elimination in the process of various interesting countries in general and the socialist countries in particular may have affected the nonsignificant results. This is basically due to the absence of accounting data for those countries.

Second, the choice of the disclosure adequacy index may be biased toward a concept of adequacy more appropriate to developed rather than developing countries. Other measures of adequacy may be more appropriate to developing countries and may need to be tailored to the specific information needs of business and government in each of those countries.

# *Alternative Techniques to Measure the Well-Being of a Region*

ROGER K. DOOST*

International businesses in general and management accountants in particular are highly involved in assessing the risks and potentials of a variety of business ventures to be located in different countries. Determination of a mean cost of capital for these entities is a function of the firm's capital structure in terms of liabilities and stockholders' equities. To determine a required rate of return on a particular project in a remote corner of the globe, however, many other factors should be considered to be able to assess the riskiness of the project and, thereby, the required rate of return.

The traditional measures used to determine the economic conditions of a region before concentrating on the return potential for a project are gross national product (GNP) and per capita GNP. This article discusses some of the limitations of these traditional methods and examines other more recent methods to measure the economic well-being of a region, including "level of living," "level of welfare," and "physical quality of life" indices. That these latter methods account for certain nonquantitative and qualitative methods that can substantially help the decision maker to assess the risks and potentials in a region and in a particular project should be noted.

Other factors, such as level of freedom, government stability, environmental considerations, absence of discrimination, and the general happiness of a populace should also be considered in determining the risks associated before committing long-term investments in a region.

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The author provides a list and leaves it to future researchers to develop measures such as the physical quality of life index to be able to assess reasonably the risks and rewards associated with investing in a region.

## GNP VERSUS PER CAPITA GNP

In comparative studies of the economic viability of different regions, per capita income and disposable personal income are more useful than a mere GNP figure, because the latter measures account for the population factor. A country such as India may have a GNP higher than that of Kuwait, but the per capita income figures for India could be drastically lower. Per capita figures provide a more accurate measure of the economic conditions of a population.

## LIMITATIONS OF GNP AND PER CAPITA GNP

Even per capita income figures have many shortcomings because they measure only material items. Some areas with high per capita income may do quite poorly in terms of the quality of life and many other important non-economic factors, such as infant mortality, medical care, educational opportunities, police protection, sanitation and environmental considerations, governmental stability, level of equitable treatment, the degree of discrimination, and the general happiness of a populace. Many of these non-economic factors may be more important for a decision maker to determine whether to move to or to invest in an area for a long-term commitment. The longer the duration of the forecasted period, the more important these non-economic considerations become.

A general flaw of the current economic measurement techniques is the fact that the numbers are simple averages. Total income is divided by total population to arrive at per capita income figures. As a result, a region with a highly distributed income will be treated the same as another region with a low percentage of extremely wealthy, a high percentage of extremely poor, and a low percentage in the middle income bracket as long as the average per capita incomes are close. Such results can be misleading. Regions with extremes of wealth and poverty may be subject to more instability and uncertainty. For example, many Latin American countries have a low percentage of extremely wealthy and a high percentage of extremely poor people, whereas the percentage of the middle income group is much higher in North America.

Another shortcoming of these economic measures is that they include only certain items where exchange of goods and services

are involved. The cost of housework is totally excluded. As a result, economies that include major housework activities including cooking, cleaning, laundry, weaving, at-home child care, and even building shacks or houses for personal use are not properly considered in determining the per capita income. In addition, GNP includes the cost of services, such as the police force, which may have little or no relevance to the economic well-being of a society. A high crime area may require a large police force. The high cost of a police force does not, however, necessarily mean a higher economic well-being.

GNP and per capita income measurements do not account for the value of leisure time. A region with a lower per capita income may be rich in cultural activities, parks, and recreational facilities. These factors can also be important in decisions that involve long-term commitments in capital and manpower.

### OTHER FACTORS RELATED TO WELL-BEING

General economic measurements also ignore environmental factors related to the level of industrialization, urbanization, air and water pollution, and other risks to the health and well-being of the people. The level of employment and the unemployment rate, although reflected in the final amounts of the GNP figures, are also important determinants of a region's well-being. Such factors can be important in decisions involving investments and other decisions with long-term consequences.

The crime rate, existence of vandalism, and the level of safety can also play an important role for many corporate decisions. Such factors affect insurance rates and risks involved in doing business. The risks involved include not only the capital invested but also the life and safety of the executives and administrators assigned to such regions. Some countries have recently become unsafe because of terrorism and antagonism to U.S. interests.

The general governmental stability or instability, attitudes toward business in general, and the level of protection and encouragement a government is willing to provide the various businesses in terms of export/import, taxation, and regulations are also important determinants of economic decisions with long-term effects. Stability is viewed in terms of the longevity of a government and its ability to maintain calm and an acceptable level of satisfaction among its people.

The level of freedom and the outlook of the government and the people toward a certain industry and product are also important

in determining the level and the potential for an investment. Freedom House has provided the *Map of Freedom* for the world.[1] Countries are divided into free, partly free, and not free. *Freedom* deals with the freedom of enterprise and of people to choose their occupation and their political affiliation and to determine other preferences. Many black African and Communist countries are considered to be in the not-free category. Austria, New Zealand, and West European and North American countries are considered in the free category. Some Central and South American countries and some countries in North Africa and the Middle East are classified in the partly free category.

The outlook of a people or a nation as a whole toward an industry or a product is also important in terms of a project's long-term success or failure. For example, many Middle Eastern countries find the production and sale of beer or liquor offensive to their religious beliefs. Although a market may exist for such products, long-term success of such projects in those countries is doubtful. Some Middle Eastern countries have recently jeopardized the banking industry because of their interpretation of Islamic teachings. They maintain that charging interest is illegal and in violation of the Islamic laws.[2]

### ALTERNATIVES TO PER CAPITA GNP

The United Nations has suggested a "level of living" index which measures the flow of goods and services affecting welfare, and a "level of welfare" index which measures the output of these activities. The "level of living" index is defined as the minimum requirements for private consumption including food, shelter, clothing, and an acceptable level of household goods. The "level of welfare" is considered the output to the system and includes transportation facilities, health care, educational and cultural activities, and the level of employment as a means to an end to provide respect, dignity, and self-worth to people.

Another improvement suggested for the GNP is a method named the "measure of economic welfare." This method considers an allowance for household services and leisure and adjusts for the discomforts associated with industrialization and urbanization.

The "physical quality of life index" (PQLI) was developed by

[1] *The Map of Freedom* (New York: Freedom House, 1981).

[2] Tahirih Khodadoust Foroughi, "The History and Nature of Private Enterprise Accounting Information Needed Before and After Social Crisis: The Case of Iran," *International Journal of Management* (December 1984), 41–49.

the Overseas Development Council (ODC) under the direction of Dr. Morris D. Morris in response to a widely felt need for an indicator to measure the level of physical well-being that could be used either by itself or in conjunction with per capita income indicators.[3] PQLI was first presented in its preliminary form to the ODC's annual assessment conference in 1977. One hundred and fifty countries and dependencies are included in this comparative study.

The PQLI is a measure of how societies provide certain important social benefits. The index is used to measure life expectancy, infant mortality, and literacy rates in various countries. This index, it is argued, considers improvements in physical well-being are the consequences of a complex interplay of physiological, psychological, nutritional, medical, social, cultural, and environmental factors of which relatively little is known. The criteria suggested are surrogates for assessing the quality of life in each region.

Morris notes that PQLI does not intend to measure economic growth, economic development, and total welfare. The index is a result of macro rather than micro performance. It does not measure individual projects or efforts but only results. PQLI is not intended to measure intangibles, such as freedom, justice, happiness, or leisure.

Some correlation exists between the GNP and the PQLI measures. However, countries with a high GNP measure do not necessarily have a high PQLI measure or vice versa. For example, Sri Lanka, with a per capita GNP of $179 in the early 1970s, had a PQLI measure of 82 (on a scale of 100), and the United Arab Emirates, with a per capita of $14,368, had a PQLI of 34.

In 1974, Mississippi and Utah received a PQLI of 89 and 95 percent, respectively. The average PQLI for the United States was 93 percent. Nationally, whites had a PQLI of more than 95 percent, and blacks had a PQLI of 88 percent for the same period.

Morris suggests that the PQLI may be used by international organizations in their planning and policy making by using the following classification:

| Class | Per capita GNP level | PQLI level | Remarks |
|---|---|---|---|
| I | High | High | Developed countries.<br>May have maintenance needs |

[3] Morris D. Morris, *Measuring the Condition of the World's Poor: The Physical Quality of Life Index* (New York: Pergamon Press, 1979).

| | | | |
|---|---|---|---|
| II | High | Low | Middle Eastern countries. Need technical assistance |
| III | Low | High | Cuba, Korea, Sri Lanka. Need economic assistance |
| IV | Low | Low | Afghanistan, Bangladesh, most black African countries. Require special international attention. |

The PQLI promises to serve as a creative complement to the per capita GNP. By focusing on results rather than inputs, PQLI accounts for how widely certain basic characteristics are distributed within and among populations. It provides information of the changing distribution of social benefits among countries and within a country, between sexes, among ethnic groups, between rural and urban areas, and by region and sector. The PQLI measure also helps policy makers through the use of comparative tables. The PQLI measure facilitates international comparisons and helps to focus attention on problem areas. It also can be used to set achievable objectives. PQLI identifies countries that have been able to achieve socially desirable results at different levels of economic performance. It also identifies countries with high economic performance that have not achieved comparable social performance.

## A PRELIMINARY CHECK LIST

Exhibit 1 provides a preliminary check list of the factors international decision makers must consider in assessing regional risks, as well as those associated directly with a project.

An elementary approach to this risk assessment could assign to each item on the list a factor of 1 to 5, with 5 signifying a very risky or the worst condition. A low total number would signify a relatively safe, stable, and healthy region; a high total number would indicate that management should be cautious of the extremes and the potentially unfavorable climate.

In policy making, planning, and economic decisions, per capita income figures should be used in conjunction with other measures, such as the "level of living," the "level of welfare," the "measure of economic welfare," and the "physical quality of life index." If possible, new indices should also be developed to incorporate other factors, such as sanitation, environmental considerations, governmental stability and cooperation, level of freedom, crime rate,

**Exhibit 1. A Check List of Factors to Be Considered in Assessing Regional Risks and Rewards**

| |
|---|
| Gross national Product (GNP) |
| Per capita GNP |
| Standard deviation of per capita GNP (dispersion and range) |
| Value of housework (not included in GNP) |
| Sanitation and environmental considerations |
| Physical quality of life (infant mortality, life expectancy, literacy rate) |
| Government stability |
| Level of equitable treatment |
| Level of freedom of a populace |
| Crime rate and police protection |
| Cultural activities |
| Recreational facilities |
| The level of employment (or unemployment rate) |
| Attitude toward business |
| Level of living (minimum provisions for food, shelter, clothing, and household goods) |
| Level of leisure for the work force |
| Medical care |

leisure time, unemployment rate, cultural activities, and recreational opportunities. The tables prepared from these measures should show the extent of economic and social justice by the level and the extent of extremely well-off and extremely deprived members in a social group. Some of the suggested indices may be somewhat subjective; in such instances, the assumptions may be listed, and a range could be provided which would explain the range of variations under different assumptions.

Whether through the establishment of new indices or use of what is currently available, the decision maker should be aware of the limitations of per capita GNP. The decision maker should consider other important factors discussed in this paper and should use those factors that are relevant to the decisions which can range from policy making and governmental planning to economic decisions and plans by private corporations — particularly decisions that involve investments in different regions of the globe.

This paper has described some of the alternative and complementary measures per capita GNP. Additional factors which should be incorporated in such indices were also reviewed. No attempt to compute mathematically the latter indices was made.

# *The Route of the Seventh Directive of the EEC on Consolidated Accounts — Slow, Steady, Studied, and Successful*

RICHARD VANGERMEERSCH*

Although proposed in 1974, the Seventh Directive, which deals with consolidated accounts, was not adopted by the European Economic Community (EEC) until 1983. The process began with a memorandum on the topic of consolidated accounts by the Study Group of Expert Accountants (Groups D'Etudes des Experts Comptables de la C.E.E.). In 1976, the EEC's administrative staff published its first draft on this topic. In February 1977, the EEC Economic and Social Committee gave its official opinion. In October 1978, the European Parliament endorsed the report of its Legal Affairs Committee on the Seventh Directive. In January 1979, the EEC administrative staff presented its second draft, and finally, the EEC Council of Ministers passed the Seventh Directive on June 13, 1983.

The EEC's goal is to harmonize the company laws of its member states, and it has used the directive process to reach this goal.[1] This harmonization is necessary to meet a requirement of the Treaty of Rome, the founding document of the EEC, to abolish obstacles to freedom of movement of persons, services, and capital among member states.[2] The EEC has not only been concerned with harmonizing company laws to have equitable reporting re-

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[1] Price Waterhouse, *Doing Business in the European Community* (New York: Price Waterhouse Center for Transnational Taxation, 1983), 55.

[2] Sharon M. McKinnon, *Consolidated Accounts: The Seventh EEC Directive* (Netherlands: AMSA and Arthur Young International, 1983), 12.

quirements for companies but also is interested in the rights of shareholders, creditors, and employees.[3] The Seventh Directive on consolidated accounts was issued as an important part of this goal of harmonization.

The specifics of the accounting requirements of the 1983 promulgation have already been reviewed by many organizations, such as the larger international public accounting firms.[4] The purpose of this study is to elaborate on the history of the directive as it passed through the stages of (1) the 1974 memorandum of the Study Group of Expert Accountants, (2) the 1976 first draft of the EEC administrative staff, (3) the February 1977 opinion of the Economic and Social Committee, (4) the opinion of the European Parliament in October 1978, (5) the January 1979 second draft of the EEC administrative staff, and (6) the final promulgation by the EEC Council of Ministers on June 13, 1983. The goals of this study are to describe each of the stages, to highlight the key issues of each stage, and then to propose conclusions concerning the EEC process for the Seventh Directive.

## THE MEMORANDUM OF THE STUDY GROUP OF EXPERT ACCOUNTANTS

The Study Group of Expert Accountants of the EEC is composed of members appointed by the national accounting professional bodies and has a national representative and a technical adviser for each EEC member state. The national representative may also add other technical advisers to the delegation.[5] The Study Group has its office in Brussels and is a part of the Union Europeane des Experts Comptables Economiques and Financiers (UEC),[6] which is similar to the EEC in that it has adopted a policy of low profile non-antagonistic, incremental progress toward change. The EEC places great weight on the Study Group's opinions if there are no political consequences. Political realities often overtake technical arguments.[7]

The Study Group prepared the memorandum "On the Rules to Advocate on the Subject of Consolidated Accounts" in 1974 in

[3] Ibid., 13.

[4] Ibid., 1–392 and Price Waterhouse, *Special Supplement on the EEC Seventh Directive: Consolidated Financial Statements EEC Bulletin* (Brussels, EEC Services Group, Price Waterhouse, 1983), 35 pp.

[5] Letter from a member of the EEC Services Group of Price Waterhouse in Brussels.

[6] A. M. El-Agraa, ed., *The Economics of the European Community* (New York: St. Martin's Press, 1980), 301.

[7] Ibid., 301–2.

response to a request from the EEC administrative staff.[8] The memorandum by the Study Group was the first stage of the EEC process;[9] the use of an independent party to write the preliminary report is not uncommon.[10] This EEC request was a part of the process of the proposal for the EEC's Fourth Directive, which dealt with the format of annual accounts, valuation methods to be adopted for preparation of annual accounts, content of annual reports, and provisions concerning publication of the accounts.[11] The Fourth Directive did not consider the preparation of consolidated accounts.[12]

The Study Group expressed its overriding philosophy:

> Numerous and complex aspects can arise in the preparation of consolidated accounts and the practices and methods in order to prepare such accounts are still evolving. . . . It is desirable that the directive to prepare consolidated accounts must, therefore, be as general as possible and not be in the form of fundamental rules. The questions of very complex applications should be left to the preference of competent national or international accounting organizations.[13]

The Study Group took the legal approach to consolidations by requiring consolidated accounts for a parent and companies in which the parent owns, directly or indirectly, more than 50 percent of the voting common shares.[14] A second level of control in which the parent has by contract the power to name a majority of the board of directors of a company or has an effective majority of the voting stock could exist.[15] This second level may be labeled the economic approach to consolidations. Such companies, the Study Group recommended, ought to be permitted to consolidate.[16] This "ought to be permitted" would have given considerable leeway to the national accounting and legislative bodies of the member states, since there would have been an option available

[8] Study Group of Expert Accountants of the European Economic Community, *Memorandum on the Rules to Advocate on the Subject of Consolidation of Accounts* (Brussels: Study Group, 1974), 1.

[9] Price Waterhouse, *Doing Business in the European Communities*, 23.

[10] Study Group of Expert Accountants of the European Economic Community, *Memorandum on the Rules*, 1.

[11] Price Waterhouse, *Doing Business in the European Communities*, 57–58.

[12] Interview with member of the staff of the EEC's Directorate — General III, Internal Marketing and Industrial Affairs, Directorate D, Approximation of laws, freedom of establishment and freedom to provide services, Number 2, Company law, industrial democracy and standards.

[13] Study Group, *Memorandum*, 1.

[14] Ibid.

[15] Ibid.

[16] Ibid., 2.

to them without a mandated requirement, as in the case of the more than 50 percent ownership. The Belgian and French delegations were in favor of an obligatory consolidation whenever the parent possessed more than 50 percent of the general voting stock.[17] Since the most controversial issue in the Seventh Directive was probably the issue of the legal approach versus the economic approach, it is very important to note the view of the Study Group.

The Study Group allowed two exceptions to the requirement of consolidation when the parent owns more than 50 percent of the voting stock: (1) the inclusion of the subsidiary has an immaterial effect on the total and (2) the inclusion would lead to misleading results.[18] However, the Study Group made it clear that subsidiaries in different industries were not to be excluded for that reason and that the stratification by industry was preferable to exclusion.[19] The Study Group was quite traditional and general in its recommended treatments for intercompany transactions, minority interests, and the difference between book value and fair market value at the date of purchase.[20] It concluded that it was not desirable to try to specify the detailed rules for consolidation, which could be left to the decision of national and international accounting organizations.[21] It avoided the foreign currency translation issue but recommended disclosure of the method chosen in the notes to the accounts.[22] It also mentioned the equity method of accounting for affiliated companies but considered the method still too controversial to be required.[23]

The Study Group memorandum could be labeled very general, nationalistic, traditional, relatively flexible, and noncontroversial. This is not surprising in the relatively short time that the issue was studied. The differences between the memorandum and the 1976 draft, in which a more economic control viewpoint was adopted by the EEC administrative staff trained more in law than in accounting, will be interesting.

### THE 1976 DRAFT OF THE COMMISSION

The EEC has fourteen commissioners appointed for four-year terms; two each are appointed by the larger member states of France, West Germany, Britain, and Italy. Each remaining member

[17] Ibid.
[18] Ibid.
[19] Ibid., 2–3.
[20] Ibid., 3–4.
[21] Ibid., 3.
[22] Ibid., 5.
[23] Ibid.

state appoints one.[24] These fourteen commissioners are responsible for twenty-eight departments called either directorate generals or administrative offices.[25] The department responsible for the seventh directive was Directorate-General III (DG 3), Internal Markets and Industrial Affairs. Within DG 3, the work was done in Directorate D, Approximation of Laws, Freedom of Establishment and Freedom to Provide Service, and by its Section 2, Company Law, Industrial Democracy and Standards.[26] The staff of DG 3.D.2 ranged from two to four in the time period of the preparation of the Seventh Directive. Much of this period overlapped its work on the Fourth Directive. It is remarkable that DG 3.D.2 could handle as much work load as it did, since both the Fourth and Seventh Directives involved mammoth efforts.

As one might expect from the significance of company law in the EEC member states, the two top officials of DG 3.D.2 were lawyers.[27] The commission is not merely the administrative arm of the EEC, since its most important power is the right to initiate policy proposals. The Council of Ministers cannot introduce a Community Law unless it has received a proposal on the subject of such a law from the commissioner.[28]

A directive is not, in principle, immediately effective internally but creates obligations on the governments of member states that individuals and enterprises may cite before the courts of law.[29] The individuals have redress to a national court, the European Court, or to the commission.[30]

The 1976 Draft began with a preamble that contained some very revealing points:

> Whereas the annual accounts of companies belonging to a group cannot by themselves give a true and fair view of their position;
>
> Whereas groups of companies are in fact economic units in which all the member companies and undertakings are managed on a central and unified basis in the interest of the whole group, . . . it must become compulsory to draw up group accounts both in respect of companies heading a group and those which are in a position of dependency within a group;

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[24] Ruth Barrington and John Cooney, *Inside the EEC: An Irish Guide* (Dublin: O'Brien Press, 1984), 43.
[25] Ibid., 45–46.
[26] *Directory of the Commission of the European Communities* (Luxembourg: Office for Publications of the European Communities, 1984), 25–26.
[27] Interview with member of staff of DG III, D2.
[28] Barrington and Cooney, *Inside the EEC*, 47.
[29] Price Waterhouse, *Doing Business in the European Communities*, 20.
[30] Ibid.

and

Whereas a number of general principles . . . must be laid down in order to ensure that items . . . can be readily compared.[31]

The first point showed a preference of the tradition of the United Kingdom for a true and fair view, rather than the continental orientation to the chart of accounts.[32] That the Fourth Directive also adopted the true and fair view approach should be noted.[33]

The second point stressed "managed on a central and unified basis" rather than the more than 50 percent ownership basis. Another way of looking at this is as an economic versus legal approach, or with tongue in cheek, West Germany versus everyone else. The third point involved compulsory creation of consolidated accounts, which seemed to give little room to maneuver. The fourth point concerning general principles meant that specific rules were to be promulgated.

The terms "dependent undertaking," "dominant undertaking," and "dominant influence" in Article 2 indicated that the more than 50 percent ownership test would not be the only test employed for consolidations. A dependency would also occur when an undertaking could appoint more than half of the members of the other undertaking's administrative, managerial, or supervisory body.[34] Article 3 required that the dominant undertaking exercised in practice its dominant influence to the effect that all such undertakings are managed on a central and unified basis by the dominant undertaking.[35] There was an assumption that an article 2 dependency situation led to management on a central and unified basis.[36] Article 4 went further and stated that even if no Article 2 relationship existed, a group existed if there were management on a central and unified basis.[37] If there were an ownership of 20 percent or more and one or more group undertakings were exercised in practice, a dominant influence on one or more other undertakings to the effect that all such undertakings were managed

[31] *Official Journal of the European Communities*, C14 Volume 22 (17 January 1979), 2–4.

[32] Christopher Nobes, *Internal Classification of Financial Reporting* (London, Sydney, and New York: Croom Helm and St. Martin's Press, 1984), 4–5.

[33] Price Waterhouse, *Handbook on the EEC Fourth Directive: The Impact on Company Accounts in the Nine Member States* (Belgium: Price Waterhouse, 1979), 4.

[34] *Official Journal*, 5.

[35] Ibid.

[36] Ibid.

[37] Ibid., 6.

on a central and unified basis, those dependent undertakings shall also form part of the group, and each is a group undertaking.[38]

Article 6.2(a) required parent companies to file consolidated subaccounts for their subsidiaries, although the parent was itself a subsidiary of a parent having a registered office in the EEC member states.[39] Article 6.2(b) required consolidated subgroup accounts for a parent that had its registered office outside the EEC.[40] Both proposals were the subjects of much controversy. Article 12.1(a) required that the values existing at the moment of the acquisition of the consolidated holding be used as the basis for consolidation.[41] Hence, a fair value approach was endorsed. Article 12.1(a) also specified that if the differences between book values and market values at acquisition were attributable to specific items, the differences were to be added to the relevant items. The unattributed amount was to be kept as a separate item.[42] Article 14.2(b) allowed intercompany profit on the sale of a fixed asset that had a limited useful life and had been the result of a transaction concluded at normal market conditions.[43] Article 15(d) mandated deferred taxation arising in consolidation to be recognized.[44] Article 16 required a write-off of goodwill over a maximum period of five years.[45] Article 18.1 gave member states the option to require consolidation on a pro rata basis if an undertaking were managed by a consortium of firms.[46]

There were many means to air differences in opinion as to the EEC draft. One was through the public newsletters of the large international accounting firms. For instance, Price Waterhouse had a very prompt reaction to the Commission Draft issued on April 29, 1976. The firm considered the economic concept to be foreign to eight of the nine member states.[47] That this could lead to consolidation when there is no ownership control, and nonconsolidation when there is ownership control but not central and unified management, was stressed.[48] There was opposition to the five-year maximum period for the write-off of goodwill since this

[38] Ibid.
[39] Ibid., 8.
[40] Ibid., 8–9.
[41] Ibid., 11–12.
[42] Ibid.
[43] Ibid., 13.
[44] Ibid., 14.
[45] Ibid.
[46] Ibid., 16.
[47] Price Waterhouse, *EEC Bulletin No. 23* (May 1976), 2.
[48] Ibid.

was one area where it might be wiser to take a less rigid approach.[49] The last sentence in the Price Waterhouse response to the 1976 Draft was quite apropos to the need to balance the national interests of the nine (and later ten, with Greece added to the EEC in 1981) member states: "It seems that much will depend on everybody's willingness to achieve a compromise between the economic and legal concepts of a group."[50]

The point of the controversy concerning the economic concept of control is important, especially in light of its alien nature to U.S. practice. Accountants dominate formulation of accounting rules in the United States, but lawyers, economists, and union officials may be at least as important as accountants in Europe when accounting rules are made. It is not necessarily a better or worse situation, but it is clearly a different situation.

### THE 1977 ACTION OF THE ECONOMIC AND SOCIAL COMMITTEE

At the time of the Seventh Directive, the Council of the EEC had appointed 144 members, based on national lists to the Economic and Social Committee. This committee was created by the Treaty of Rome with advisory status basically to represent three main groups: employers, union members, and the general interest. Each national delegation reflects this tripartite composition,[51] and the selection process for the commission guarantees this balance.[52] The committee is helpful to both the Council and the Commission by forwarding its opinions to them before policy is set.[53] The Economic and Social Committee was requested by the EEC Council to deliver an opinion on the 1976 Draft of the Seventh Directive. The committee referred the matter to its section for Industry, Commerce, Crafts and Service, which in turn asked its Study Group on Company Law to draft its opinion.[54] The Study Group was comprised of thirteen members whose positions at the time were most impressive,[55] as were the positions of all the members in the 1984 index for the Economic and Social Committee.[56]

The report of the Study Group on Company Law raised some

[49] Ibid., 4.
[50] Ibid., 5.
[51] El-Agraa, *Economics,* 32.
[52] Barrington and Cooney, *Inside the EEC,* 22.
[53] El-Agraa, *Economics,* 32.
[54] Economic and Social Committee, *Report of the Section for Industry, Commerce, Crafts and Services on the Proposal for a Seventh Directive . . .* (Brussels: Economic and Social Committee, 1977), 1.
[55] Letter from the staff of the Economic and Social Committee.
[56] *Index* (Brussels: Economic and Social Committee, January 1984), 71 pp.

key points under the general comments section, one of which concerned exemptions for smaller companies because of cost of compliance and lack of expertise. A second one regarded the vagueness inherent in the terms "significant influence" and "dominant influence."[57] On this topic, the Study Group of the Economic and Social Committee was opposed to Article 6(2)(b) on the requirement of a company registered outside the EEC to consolidate holdings in the EEC.[58] There also was opposition to the mandatory write-off of goodwill and to the maximum period of five years.[59] The Study Group on Company Law also opposed the requirement for sales analysis by product and by geographical area as being prejudicial for smaller companies from a competition viewpoint.[60]

On February 24, 1977, the Economic and Social Committee gave its formal opinion, which was to adopt the commission draft with the comments forwarded from the Study Group on Company Law.[61] Four amendments were offered from the floor, and three were defeated.[62] The one that passed (thirty-nine for, twenty-seven against, and eight abstentions) dealt with Article 6(2)(a) of the 1976 Draft by the commission. It mandated consolidated subgroup accounts only when overall consolidated statements were not prepared.[63] The report referred to the opinions on consolidations by such organizations as the United Nations, the Organization for Economic Cooperation and Development, and the International Accounting Standards Committee, especially its Standard No. 3.[64]

The work of the Economic and Social Committee was completed relatively quickly and focused on the controversial areas. The very high caliber of the members of this body gave its opinion much weight; however, the role of this committee may be underrated by many.

In its August 1977 *EEC Bulletin*, Price Waterhouse noted the opinion of the Economic and Social Committee and other groups. The concerns of smaller companies were stressed as coming not only from the Committee but also from the Union of Industries

[57] Economic and Social Committee, *Report*, 3–4.
[58] Ibid., 21–22.
[59] Ibid., 18.
[60] Ibid., 21–22.
[61] Economic and Social Committee, *Opinion of the Economic and Social Committee on the Proposal for a Seventh Directive* . . . (Brussels: Economic and Social Committee, 1973), 1.
[62] Ibid., Appendix, 1–3.
[63] Ibid., Appendix, 3.
[64] Ibid., 3.

of the Economic Community (UNICE).[65] The committee's view of the requirement of firms not subject to the Fourth Directive to meet the requirements of the Seventh Directive was noted, as well as a similar position taken by the European Communities Committee of the House of Lords in the United Kingdom.[66] Although the Economic and Social Committee favored the economic approach, UNICE did not. The EEC Accountants' Study Group had proposed a compromise in which

> . . . through additional disclosure, one set of financial statements would give consolidated financial information on both an economic basis and a power of control basis, in those cases where the two results would not be the same.[67]

Opposition to the economic approach in the European Communities Committee in the House of Lords was noted.[68] Opposition to the five-year write-off of goodwill was nearly universal. A change in that proposed requirement in the Fourth Directive was hoped to lead to the same change in the Seventh Directive.[69]

### THE 1978 REPORT OF THE EUROPEAN PARLIAMENT

The first direct election of the European Parliament occurred in 1979.[70] Before that, Parliament members were appointed by the nine national parliaments in the member countires.[71] There are no national sections, only European-level political groups.[72] Parliament must be expressly consulted by the commission on important matters and meets for one-week sittings seven or eight times a year. Parliamentary committees meet between sessions.[73] The president of the European Parliament referred the 1976 commission draft to the Legal Affairs Committee on May 25, 1976. Its report on May 17, 1978, had twenty-one opening points. The committee approved the concepts as well as central and unified management in points 2 and 3. In point 8 it endorsed subgroup reporting for non–EEC registered companies but permitted an alternative of

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[65] Price Waterhouse, *EEC Bulletin No. 32*, 2.
[66] Ibid.
[67] Ibid.
[68] Ibid.
[69] Ibid.
[70] Barrington and Cooney, *Inside the EEC*, 52.
[71] Nancy L. Hoepli, ed., *The Common Market, The Reference Shelf*, vol. 46, no. 5 (New York: H. W. Wilson Company, 1975), 15.
[72] Ibid., 20.
[73] Ibid., 20–21.

worldwide consolidated accounting. In point 14 it endorsed a write-off of intangibles longer than five years.[74]

The Report of the Legal Affairs Committee broadened the concept of the group to include a horizontal group (consortium). In this situation, the central and unified management is exercised not by a single dominant undertaking but by all the undertakings forming the grouping.[75] The committee also wanted a more precise definition of deferred taxation,[76] and it concluded that the commission proposal would aid in comparing EEC companies and would protect the interests of shareholders, employees, and third parties.[77]

A short report of the Committee on Economic and Monetary Affairs of the European Parliament was included with the report of the Legal Affairs Committee. The Committee on Economic and Monetary Affairs seemed to endorse the legal concept in that clarity and ease of handling were enhanced by that concept.[78] It did, however, issue a strong endorsement of the consolidation of EEC holdings of companies headquartered outside the EEC, in that multinational companies must be brought under international surveillance.[79]

A debate on the report in the European Parliament was held on June 15, 1978, and the report was passed on the next day.[80] The discussant of the Legal Affairs Committee report also endorsed the report for his parliamentary group, the Christian Democrats.[81] The spokesman for the Socialist Group commented on the importance of involving workers employed with a company in the decision process of that company.[82] The spokesman for the European Conservative group endorsed the report. The commission representative responded to the views expressed in the report and modified the commission's position on Article 6[83] and most of the other amendments.[84] He defended the economic concept as being

[74] European Parliament, *Report . . . on the Proposal . . . for a Seventh Directive, . . .* Document 103/78, 5–7.
[75] Ibid., 26.
[76] Ibid., 31.
[77] Ibid., 36.
[78] Ibid., 38.
[79] Ibid., 39.
[80] *Debates of the European Parliament, Sitting of Friday, 16 June 1978*, 300.
[81] *Debates of the European Parliament, Sitting of Thursday, 15 June 1978*, 242–44.
[82] Ibid., 245.
[83] Ibid., 248.
[84] Ibid.

in line with the reality of business relationships in all the member states, not just a few.[85]

The input by the European Parliament was not, in the writer's opinion, in proportion to the length of time it held the 1976 draft. Since the Parliament is not nationalistic but political party oriented, national interests were primarily left to the next, and last, stage of the process. Obviously, accounting is much more a political issue in the EEC than in the United States.

The Price Waterhouse *EEC Bulletin* No. 37 of June 197 reported that the long wait was worthwhile in that subgroup consolidation was disapproved, worldwide reporting could replace EEC consolidation for a non–EEC dominant undertaking, and the amortization of goodwill could be longer than five years.[86] The view of the Economic and Monetary Committee on the legal concept was noted.[87]

### THE 1979 COMMISSION DRAFT

The Fourth Directive had been approved by the EEC Council of Ministers on July 25, 1978,[88] and the second draft of the Seventh Directive was issued on January 17, 1979.[89] The most important change occurred in Article 6a in which subgroup consolidated accounts could be avoided by meeting six requirements.[90] Article 11.2 adopted the limits of two of the three size criteria of the Fourth Directive and allowed the member states to permit companies to file a group consolidated balance sheet in an abridged form.[91] Article 15d on deferred taxes gave companies the option of showing the cumulative amount in the balance sheet or in the notes to the accounts.[92] The same size test for abridged reporting was applied in Article 20a for the disclosure of financial commitments, sales by geographical areas, average number of employees, and the effect of accounting differences with the Fourth Directive.[93] The second draft of the commission was completed relatively promptly and did respond to the concerns as to subgroup consol-

[85] Ibid.
[86] Price Waterhouse, *EEC Bulletin No. 37* (June 1978), 8.
[87] Ibid.
[88] *Official Journal of the European Communities,* C 14 Volume 22, 2.
[89] Ibid., cover page.
[90] Ibid., 8.
[91] Ibid., 11.
[92] Ibid., 14.
[93] Ibid., 16–18.

idations and smaller groups. The deferred tax issue was sidestepped. The Commission remained firm, however, on its view of economic consolidation. Price Waterhouse *EEC Bulletin* No. 42 of March 1979 noted the continuation of the definition of a group, although the wording was changed from central and unified management to unified management, and of consolidations of EEC companies by dominant companies registered outside the EEC.[94]

### THE 1983 DIRECTIVE

The last stage took from September 1978[95] to June 13, 1983,[96] and was comprised of a council working party of national representatives, the Committee of Permanent Representatives (Coreper), and the Council of Ministers.[97] The Commission was involved in the working party.[98] There were four readings, rather than the usual three, by the working party.[99] In this last stage, national interests played a most important role, especially in light of the 1966 Luxembourg compromise that made unanimity necessary for agreement when vital national interests are at stake.[100] When one considers the diversity of reporting requirements of the then ten EEC member states, it is no wonder that almost five years elapsed before the directive was passed. Sharon M. McKinnon noted three of these differences of requirements among the countries: (1) parents obliged to prepare consolidation accounts, (2) normal basis of consolidation, and (3) consolidation technique adopted. For instance, in the first difference, Denmark, Ireland, the Netherlands, and the United Kingdom required all parents; France (recommended) and Italy (requirement being introduced) focused on parents listed on a stock exchange; Belgium (if listed) and Germany (or if a parent is public company) stressed parents of large groups; Greece and Luxembourg set no requirements.[101]

The purpose of this paper was not to review the many specifics of the 1983 promulgation but to comment on the six stages of

[94] Price Waterhouse, *EEC Bulletin No. 42* (March 1979), 1.
[95] Ibid., 1.
[96] Commission of the European Communities, *Seventeenth General Report of the Activities of the European Communities* (Brussels: Office for Official Publications of the European Communities, 1984), 86.
[97] McKinnon, *Consolidated Accounts*, 25.
[98] Price Waterhouse, *Doing Business in the European Community*, 21.
[99] McKinnon, *Consolidated Accounts*, 27.
[100] Barrington and Cooney, *Inside the EEC*, 13.
[101] McKinnon, *Consolidated Accounts*, 16.

the approval process. As such, the discussion of the provisions of the 1983 directive is brief. Article 1 required consolidations in companies in which a majority voting interest or the power to appoint the majority of the board of directors was held.[102] The German situation was covered by requiring consolidation of an undertaking which has the contractual power to exercise dominant influence.[103] Article 5 was a concession to Luxembourg and granted an exemption for financial holding companies.[104] Article 11 modified the controversial consolidation of EEC holdings of non–EEC registered companies by giving an exemption if overall consolidation statements are issued, if the statements follow, or are equivalent to, the Fourth Directive, and if the statements are audited.[105] Article 20 permitted pooling accounting if at least 90 percent of the consideration was in stock.[106] Article 31 adopted the goodwill amortization rules of the Fourth Directive, which permitted a maximum write-off period of more than five years, as long as that period does not exceed the useful economic life of goodwill.[107] Negative goodwill was covered in Article 31, which allowed a transfer to the profit and loss accounts only in two limited situations.[108] Article 40 gave the member states until January 1, 1988, to put into effect the laws, regulations, and administrative provisions for the Seventh Directive and until January 1, 1990, to require the first application of consolidated accounts.[109]

The last stage was by far the most nationalistic of the stages of development of the Seventh Directive. Without a doubt, the expression of national interests is needed to cover such controversial issues as economic control. One must be impressed with the way the final draft covered all the bases to please the various countries. One is less impressed with the time it took to achieve this accord and with the time that the Seventh Directive was mandated to be in effect.

[102] *Seventh Council Directive Concerning Consolidated Accounts,* as reprinted in Price Waterhouse *EEC Bulletin* (July 1983), 29.
[103] McKinnon, *Consolidated Accounts,* 34.
[104] Ibid., 46.
[105] *Seventh Directive,* 31.
[106] Ibid., 32.
[107] Ibid., 19, 32.
[108] Ibid., 32.
[109] Ibid., 34.

**CONCLUSIONS**

The result of the Seventh Directive is quite impressive, as is the fact that this was accomplished with a small staff in DG3.D.2. Although there might be little or no additional disclosures for U.K. companies, this is certainly not true for Greek, Luxembourgian, French, and Italian companies. The goal of harmonization must be tempered by the fact that different member states have different concepts, practices, and laws to control relationships. The use of optional requirements by member states helps greatly in this area. Harmonization of different control situations might have led to similar accounting for dissimilar events. Clearly, time and means available were adequate for interest groups to make known their views.

In some areas there were apparent inefficiencies. The first stage might have been the place to introduce more nationalistic concerns into the memorandum from the EEC Accountant's Study Group. The commission would probably have benefitted greatly from this input. The second stage, the EEC first draft, was perhaps more lawyer oriented than accounting oriented. While this was necessary considering the complexities of the number of member states, more consideration to problems of accounting implementations would have saved much controversy. The third stage of the Economic and Social Committee opinion was, to the writer, done extremely well and quickly. The fourth stage of the opinion of the European Parliament took too long, even considering that the Fourth Directive was not yet promulgated. The European Parliament setting of political parties, rather than national parties, resulted in a delay before national interests came to play. The fifth stage, the 1979 EEC second draft, was done quickly and was fairly responsive to the opinions of the Economic and Social Committee and the European Parliament. The last stage was lengthy but necessarily so, since national interests had yet to be presented effectively, all states had to agree, and considerable differences of opinion were present. The inclusion of Spain and Portugal, and perhaps others, make this stage more and more difficult if unanimity is to be kept.

What does this Seventh Directive mean to U.S. accountants? Clearly, uniformity for consolidated accounts is not, and will not, be present, since member states have some time to change their company laws and have, even then, significant options. It may be worth examining how many instances of economic control exist in

the United States, where this issue has not been rigorously examined from a consolidation approach, although the equity approach does touch on the economic control concept. The Seventh Directive might be usefully studied from the viewpoint of public versus private-sector control of the financial accounting rules body. The Seventh Directive and its background are important for many U.S. accountants.

# *A Comparative Analysis of Recent Pronouncements on Accounting for Changing Prices*

ROBERT BLOOM and ARAYA DEBESSAY*

Inflation has temporarily receded in some of the major industrialized nations in recent years. Historically, interest in inflation accounting has fluctuated with the rate of inflation experienced in any time period. Interest in inflation accounting understandably appears to be diminishing currently. Nevertheless, the rate of inflation is compounded over time and can become quite significant in the long run.

Overcoming the deficiencies of the conventional accounting model in periods of prolonged inflation is still an important, unresolved subject. Professional accounting bodies in several countries have been searching for satisfactory solutions to the financial reporting problems caused by general and specific price-level changes.

In 1979, the United States became the first highly industrialized country to issue a financial reporting standard on accounting for changing prices — *Statement of Financial Accounting Standards No. 33* (SFAS No. 33). SFAS No. 33 was established as an experiment. Certain aspects of its disclosure requirements were modified by SFAS No. 82 in 1984.[1] In the United Kingdom, *Statement of Standard*

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[1] Financial Accounting Standards Board, *Statement of Financial Accounting Standards No. 82:* "Financial Reporting and Changing Prices: Elimination of Certain Disclosures. An Amendment of FAS 33" (Stamford, Conn.: FASB, 1984).

*Accounting Practices No. 16* (SSAP No. 16)[2] on "Current Cost Accounting" was released in March 1980, effective for fiscal periods beginning on or after January 1, 1980. SSAP No. 16 was also issued for a three-year trial period. By 1985, SSAP No. 16 had been downgraded to a nonmandatory status by the British Accounting Standards Committee (ASC).[3] Canada issued a pronouncement on "Reporting the Effects of Changing Prices" in October 1982.[4] In seeking an approach to the problem of price-level changes, Australia proposed a standard on current cost accounting which was issued in 1982.[5] After considerable debate, the proposed standard was finally released in November 1983 as a nonmandatory Statement of Accounting Practice (SAP No. 1). The standard strongly recommends the publication of supplementary current cost accounting financial statements.[6]

This paper analyzes and compares the purposes and disclosure provisions of the standards and other authoritative statements on the impact of changing prices currently in effect in the United States, Britain, Canada, and Australia.

## U.S. STANDARD

In 1979, the Financial Accounting Standards Board (FASB) issued *Statement of Financial Accounting Standards No. 33* (SFAS No. 33): *Financial Reporting and Changing Prices.* After making a comprehensive study of the first five years of implementing SFAS No. 33, in November 1984 the FASB issued *Statement of Financial Accounting Standards No. 82* (SFAS No. 82), "Financial Reporting and Changing Prices: Elimination of Certain Disclosures," an amendment to FASB *Statement No. 33.*

By issuing SFAS No. 33, which requires mandatory, supplemental information on the effects of changing prices on business firms, the FASB sought to improve the informational content of financial reports. SFAS No. 33 (par. 3) intends to provide users with information presumably relevant for their assessment of (1) future

[2] Accounting Standards Committee, *Statement of Standard Accounting Practice No. 16,* "Current Cost Accounting" (London: ASC, 1980).

[3] K. Sherwood, "Funeral Rites — the Death Knell of CCA," *Accountancy* (U.K.) (August 1985), 26.

[4] Accounting Research Committee, *Section 4510: Reporting the Effects of Changing Prices* (Toronto: Canadian Institute of Chartered Accountants, 1982).

[5] Australian Society of Accountants and the Institute of Chartered Accountants in Australia, *Statement of Accounting Standards,* "Current Cost Accounting" (1982).

[6] Australian Society of Accountants and the Institute of Chartered Accountants in Australia, *Statement of Accounting Practice No. 1,* "Current Cost Accounting" (1983).

cash flows, (2) enterprise performance, (3) the erosion of operating capability, and (4) the erosion of general purchasing power. SFAS No. 33 thus requires certain large firms to provide supplementary financial data.

The following data are required to be disclosed by SFAS No. 33:

1. Income from continuing operations adjusted for the effects of general inflation;
2. Income from continuing operations on a current cost basis;
3. Purchasing power gains and losses on holding monetary items reported separately (i.e., not included in the income from continuing operations);
4. Holding gains on nonmonetary items net of inflation and reported separately as "increases or decreases" on nonmonetary items; and
5. Current cost or lower recoverable amounts of inventory and property, and plant and equipment at the end of the current fiscal year (pars. 29–38).

Disclosure of a five-year summary of specific financial data expressed in constant dollars is also required.

One of the required disclosures in SFAS No. 33 is income from continuing operations on a historical cost/constant dollar (HC/CD) basis. To make this adjustment, a general price-level index, which is an average measure of the particular price changes occurring in the economy, is used. Because particular prices in a given firm conceivably may not move at the same rate or even in the same direction as the general price level, and the interpretation of historical cost restated for general price-level changes is difficult, the relevance of the restated figures is in doubt. Accordingly, an inconsistency appears to exist between the purposes and this disclosure provision of SFAS No. 33. In issuing SFAS No. 82, the FASB eliminated the requirement in SFAS No. 33 of HC/CD information as long as supplementary disclosures on a current cost/constant dollar basis are provided.

SFAS No. 33 discusses (paragraphs 57 and 58) the concept of current cost:

> The current cost of inventory owned by an enterprise is the current cost of purchasing the goods concerned or the current cost of the resources required to produce the goods concerned. . . .
>
> The current cost of property, plant, and equipment owned by an enterprise is the current cost of acquiring the same service potential

(indicated by operating costs and physical output capacity) as embodied by the asset owned; the sources of information used to measure current cost should reflect whatever method of acquisition would currently be appropriate in the circumstances of the enterprise. . . .

SFAS No. 33 requires the disclosure of general purchasing power gains and losses from holding monetary liabilities and monetary assets during a period of inflation. The purchasing power loss or gain on net monetary items is not, however, included in measuring the income of the period. Purchasing power gains on monetary liabilities should be treated as an offset to interest charges for the period to reflect the real interest cost. In computing the purchasing power loss or gain, the use of the market value, rather than the face value, of the debt is important. A principal weakness of SFAS No. 33 is that the requirement to disclose the effect of the purchasing power change on monetary liabilities is based on the book value of debt outstanding. When inflation is anticipated, the nominal interest rate on debt impounds a premium for the anticipated inflation, the so-called Fisher effect. Thus, unless the interest charges are partly offset by the gains that accrue from holding monetary liabilities, the reported income for the period would be understated. From this perspective, SFAS No. 33 is deficient in terms of the method of computation and the manner of reporting the purchasing power gains on debt. The FASB, in issuing SFAS No. 82, indicated that it intends to release subsequently a statement to address current cost/constant dollar disclosure and that all pronouncements related to SFAS No. 33 will be combined.[7] Perhaps the forthcoming statement on accounting for changing prices will resolve the deficiencies in the computation and reporting of purchasing power losses and gains.

SFAS No. 33 also requires the disclosure of holding gains and losses from inventories, property, and plant and equipment net of the general inflation component, which produces an illusory, fictitious gain or loss. To the extent that a portion of these assets is financed through debt, part of the holding gain can be treated as income attributable to the present shareholders. SFAS No. 33 does not, however, call for a gearing or financing adjustment. Nor has SFAS No. 82 addressed this issue.

SFAS No. 33 requires reporting of income from continuing operations on the basis of current cost basis or lower recoverable value. All the pronouncements analyzed in this paper invoke the concept of "lower recovery value," also called "deprival value," a

[7] See *FAS 82*, par. 10, 4.

concept which is not clearly defined or justified in any of these pronouncements. The standards assert that when the recovery amount of the group of assets is below its current cost, the recovery amount — the higher of net realizable value and present value — should be applied to the assets and their corresponding cost allocations. Bonbright is often considered the father of "deprival value," which he defines as "the value of a property to its owner is identical in amount with the adverse value of the entire loss, direct and indirect, that the owner might expect to suffer if he were to be deprived of the property."[8] Thus, deprived value is the loss the owner would bear if he were to lose the property or asset(s) in question.

Unlike the other pronouncements, SFAS No. 33 prescribes permanent and material write-downs from HC/CD, as well as current-cost figures for inventories, property, and plant and equipment, to be shown in the HC/CD income. Since SFAS No. 82 eliminates the HC/CD information as long as current cost/constant dollar information is provided in accordance with SFAS No. 33, deprival value will not have to be applied to HC/CD information.

Although SFAS No. 33 is deficient in its treatment of monetary items and does not provide a monetary working-capital adjustment, the current cost income from continuing operations may be considered "distributable" or "sustainable," reflecting the amount the firm can sustain in the future or distribute as dividends while maintaining its capital and continuing normal operations. Such data should be relevant to investment decision making to the extent that such income measures can aid investors in their predictions of cash flows.

SFAS No. 33 also requires that the presentation of comparative financial data be stated in constant dollars for the five most recent years. This aspect of SFAS No. 33 recognizes the measurement problem inherent in using the dollar as a unit of measure. In periods of general price-level changes, the dollar has a serious limitation as a unit of measure since it is unstable. Dollars of different time periods have varying degrees of purchasing power. Consequently, financial statements of different periods should be restated in terms of a common unit of measure to facilitate interperiod comparisons.

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[8] J. C. Bonbright, *The Valuation of Property*, vol. 1 (New York: McGraw-Hill, 1937).

## BRITISH STANDARD

In 1980, the British standard on accounting for changing prices, SSAP No. 16, was issued.[9] As mentioned earlier, SSAP No. 16 was downgraded in 1985 to a nonmandatory status, and the British Accounting Standards Committee is attempting to prepare a more acceptable financial reporting standard on changing prices.

The fundamental objective of the U.K.'s *Statement of Standard Accounting Practice No. 16,* "Current Cost Accounting" (SSAP No. 16), is, according to paragraph 5,

> to provide more useful information than that available from historical cost accounts alone for the guidance of the management, shareholders, and others on such matters as
> (a) the financial viability of the business,
> (b) return on investment
> (c) pricing policy, cost control and distribution decisions; and
> (d) gearing.

Before it was downgraded to a nonmandatory status, SSAP No. 16 applied to most listed companies and other large entities.

To achieve this purpose, SSAP No. 16 calls for a two-stage current cost income statement and current cost balance sheet. The two-stage CCA income statement shows the current cost operating profit by deducting the current-cost adjustments for the cost of sales, depreciation, and monetary working capital from the historical cost income before interest and taxes. The current cost operating profit is based on the concept of physical capital maintenance, which emphasizes the operating capacity of the firm. By adding the "gearing adjustment" to the current cost operating profit, the "current cost profit attributable to shareholders" is measured. The gearing adjustment is a measure of the benefit (or cost) accruing to the common shareholders for having financed part of the operating assets through debt. Given that debt represents a fixed obligation, any increase (decrease) in the current cost of the assets financed by debt is viewed as a benefit (cost) to the common shareholders. From another perspective, the gearing adjustment constitutes a reduction to the current cost adjustments that were made to arrive at the current cost operating profit of the enterprise.

SSAP No. 16 requires the presentation of a current cost balance sheet, the assets of which are shown "at their value to the business based on current price levels." The "value to the business" concept

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[9] Accounting Standards Committee, *Statement of Standard Accounting Practice, No. 16.*

is equivalent to the lower of the current (replacement) cost or the recoverable amount of the asset, as in SFAS No. 33. As SSAP No. 16 (pars. 42 and 43) asserts:

> The value to the business is the: (a) net current replacement cost; or, if a permanent diminution to below net current replacement cost has been recognized, (b) recoverable amount. The recoverable amount is the greater of the net realizable value of an asset and, where applicable, the amount recoverable from its further use.

The stated aims and the disclosure provisons of SSAP No. 16 appear to be consistent. By disclosing the current cost or lower recoverable amount of a firm's assets, the balance sheet provides a more realistic assessment of the resources used by a firm and thus should enable users to compute return-on-investment ratios for comparative purposes.

The current cost profit can be viewed as a measure of "distributable income" arising from the normal operations of the firm. This measure of income, which serves to maintain the operating capability of the firm, is presumably relevant information to investors with a view to aid them in their assessment of future cash flows.

Consistent with the stated objective of providing information pertaining to financing, the current cost profit and loss account shows a gearing adjustment in determining "the current cost income attributable to shareholders." SSAP No. 16 (par. 16) offers the following rationale for the gearing adjustment.

> The net operating assets shown in the balance sheet have usually been financed partly by borrowing and the effect of this is reflected by means of a gearing adjustment in arriving at current cost profit attributable to shareholders. No gearing adjustment arises where a company is wholly financed by shareholders' capital. While repayment rights on borrowing are normally fixed in monetary amount the proportion of net operating assets so financed increases or decreases in the value to the business. . . .

The gearing adjustment represents the benefit accruing to common stockholders as a result of financing a portion of a firm's assets through debt during a period of increasing asset prices. The gearing adjustment does not, however, reflect an amount that can be distributed as a dividend without impairing the operating capability of the firm unless additional borrowing is possible. Firms are normally expected to maintain a given debt/equity ratio in real terms, however, which suggests that the nominal amount of debt should increase at the rate of inflation.

According to paragraph 50, the British gearing adjustment is computed as follows:

$$\frac{(\text{ Net borrowing })}{(\text{ Net operating assets on a current cost basis}).}\ (\text{current cost adjustments})$$

According to paragraph 45, net borrowing is the difference between

> the aggregate of all liabilities and provisions fixed in monetary terms (including convertible debentures and deferred tax but excluding proposed dividends) other than those included within monetary working capital and other than those which are, in substance, equity capital, and the aggregate of all current assets other than those subject to a cost of sales adjustment and those included within monetary working capital.

The current cost adjustments reflect changes that are deducted from historical cost income reflecting cost of sales, depreciation, depletion, and monetary working capital.

SSAP No. 16 requires a monetary working-capital adjustment to facilitate the measurement of CCA profit consistent with the physical capital-maintenance concept underlying SSAP No. 16. SSAP No. 16 (par. 11) offers the following rationale for the monetary working-capital adjustment:

> Most businesses have other working capital besides stock [inventory] involved in their day-to-day operating activities. For example, when sales are made on credit the business has funds tied up in debtors. Conversely, if the suppliers of goods and services allow a period of credit, the amount of funds needed to support working capital is reduced. This monetary working capital is an integral part of the net operating assets of the business. Thus, the Standard provides for an adjustment in respect of monetary working capital when determining current cost operating profit. This adjustment should represent the amount of addition (or reduced) finance needed for monetary working capital as a result of changes in the input prices of goods and services used and financed by the business.

The monetary working-capital adjustment consists of "(a) trade debtors, prepayments and trade bills receivable, plus (b) stocks not subject to a cost of sales adjustment, less (c) trade creditors, accruals and trade bills payable. . . ." (par. 44).

Among the current pronouncements on changing prices considered in this paper, SSAP No. 16 is the only one that does not require the disclosure of purchasing power gains or losses on holding monetary items. A strong argument can be made in favor of including properly computed purchasing power gains on holding monetary liabilities in an inflationary period. As previously stated,

interest charges on long-term loans are normally expected to reflect the anticipated inflation rate. Hence, failure to consider the purchasing power gain from holding debt as an offset to interest charges would lead to understated income. In this regard, SSAP No. 16 is deficient.

Another deficiency of the U.K. standard is that it did not address the measurement unit problem in financial reporting. Investors and other users of financial reports presumably make comparative trend analyses. Such time-series analyses can be facilitated by financial reports that are restated in a common unit of measurement, such as the "constant dollars" required by SFAS No. 33. Although the need for a constant unit of measure is acknowledged in SSAP No. 16, this standard did not call for such a measurement unit to reduce the complexity of implementing the new CCA standard (par. 37). That SSAP No. 16 did not gain general acceptability has been attributed to its neglect of the measurement unit problem and to its failure to account properly for purchasing power gains on debt in an inflationary period.

### CANADIAN STANDARD

The Canadian Institute of Chartered Accountants (CICA), the accounting standard-setting authority in Canada, took a significant step in 1979 by issuing an exposure draft proposing a current cost accounting model for the reporting of the effects of changing prices by large, publicly held Canadian enterprises. Prompted by the comments received on the exposure draft, a re-exposure draft entitled *Reporting the Effects of Changing Prices* was issued in December 1981, and the standard was subsequently released in October 1982 as Section 4510 of the *CICA Handbook.* This standard is a recommended, not a required, disclosure pronouncement. Supplemental disclosures, such as those called for in Section 4510, are all voluntary in Canadian financial reporting.

This standard reaffirms the importance of the conventional accounting financial statements as "reliable and independently verifiable" measures of actual arm's-length transactions and acknowledges the limitations of conventional financial statements during periods of prolonged inflation. Thus, without calling for changes per se in the conventional financial statements, the standard recommends supplementary data indicating the effects of changes in the prices of the specific goods and services purchased, produced, and used by an enterprise. It also recommends supplementary data of the effects of changes in the measurement unit resulting from

changes in the general purchasing power of the monetary unit. Such supplementary data are expected to help users of financial statements achieve a better understanding of the effects of changing prices on business enterprises — in making investment, credit, and other economic decisions.

The standard identifies five objectives that can be achieved by reporting the required supplementary data. These objectives concern (1) maintenance of the operating capability of the enterprise, (2) maintenance of the operating capability financed by common shareholders; (3) evaluation performance; (4) maintenance of general purchasing power of capital; and (5) assessment of future prospects (par. 6).

This Canadian standard requires the disclosure of certain supplementary information of the effects of changing prices. The supplementary information deals with specific price changes, as well as the impact of changes in the general purchasing power of the monetary unit.

The following balance sheet items are to be reported at their end-of-the-year current costs, identifying any reduction from current cost to lower recoverable amount: (1) inventory, (2) property, plant and equipment; and (3) net assets, after restating inventory, property, and plant and equipment on current cost basis. This standard requires the disclosure of comparative data, showing the corresponding amount for the preceding period restated in constant dollars.

The standard also requires the disclosure of current cost income for the period showing the cost of goods sold and depreciation, depletion, and amortization on a current cost basis or lower recovery value. In addition, the following information is to be disclosed:

1. Changes in the current cost values of the inventory, plant and equipment during the reporting period, together with information as to any reduction from current cost to lower recoverable amount, if any.
2. The amount of changes in the current cost amounts of inventory and property, and plant and equipment that is attributable to the effects of general inflation.
3. The amount of the gain or loss in general purchasing power that results from holding net monetary items during the reporting period. This amount is to be disclosed separately and not included in computing the income for the period.

4. The financing adjustment based on the current cost adjustments to income for the period.

The foregoing information is to be shown on a comparative basis with the corresponding data for the preceding year stated in constant dollars.

The income statements are primarily considered to reflect the current cost income of the enterprise. Since there is no provision for any monetary working-capital adjustment, however, such an income measure cannot be considered a complete current cost income measure of the enterprise. With the disclosure or additional supplmentary information, users may be able to compute the income attributable to shareholders under both an operating-capability concept of capital and a financial concept of capital.

The Canadian standard defines "current cost" explicitly in paragraph 15 in terms of:

> the amount of cash or other consideration that would be needed currently to acquire an asset having the same service potential as embodied by the asset owned and, depending on the extent of technological change, would be determined by reference to either current reproduction cost or current replacement cost.

When technology remains constant, current reproduction cost is the same as current replacement cost.

The Canadian financing or gearing adjustment is computed, according to paragraphs B.33 and 34, in the following manner:

$$\frac{\text{(Average net monetary liability) for the year}}{\text{(Average net monetary liability and average common shareholders' equity on a current cost basis).}}\ \text{(current cost adjustments)}$$

The net monetary liability represents all liabilities including current liabilities, but not deferred taxes (unlike the British gearing adjustment), whereas the current cost adjustments reflect cost of sales, depreciation, and depletion. Unlike the British standard (SSAP No. 16), no monetary working capital adjustment is required. Furthermore, in contrast to the British standard, instead of merely using current cost adjustments based solely on realized items, an alternate computation in the Canadian standard uses the current cost adjustments pertaining to both realized and unrealized changes in the inventory and property, and plant and equipment accounts.

Apart from the disclosure of a financing adjustment, which is not required by SFAS No. 33, and HC/CD data which are not required by the Canadian standard, the U.S. and Canadian pronouncements are quite similar. Unlike the British standard and the Australian Statement of Accounting Practice (SAP 1), the U.S. and Canadian standards constitute an attempt to provide a more comprehensive solution to the accounting problems resulting from general and specific price-level changes.

Although one of the aims of the Canadian standard is to provide information helpful for the maintenance of the operating capability of the enterprise, the disclosure provisions do not appear to provide a complete foundation for such an assessment. The same can also be said of SFAS No. 33. The income measure that is consistent with the maintenance of operating capability of the enterprise is a current cost income measure similar to that required by SSAP No. 16. The income statement, however, does not include any provision for a monetary working-capital adjustment. Such an income measure cannot, therefore, be considered a comprehensive current cost income measure.

Consistent with their aim to provide information that is presumably helpful in assessing whether an enterprise has maintained the general purchasing power of its capital, both the Canadian standard and SFAS No. 33 require information of the purchasing power gains and losses from holding monetary items. As previously observed, SSAP No. 16, on the other hand, does not require such information. The relevance of purchasing power gains and losses, particularly the manner in which such data are computed both in the Canadian standard and SFAS No. 33, has been seriously questioned. In general, while there appears to be much consistency between the aims and the required supplementary information, the Canadian standard shares some of the shortcomings of SFAS No. 33, particularly regarding the treatment of monetary items.

The CICA published a booklet reporting the first year's experience with Section 4510, "Reporting the Effects of Changing Prices," in an attempt to assess the usefulness of the required disclosures.[10] The CICA Accounting Standards Committee has indicated that it will undertake a comprehensive review of Section 4510 five years after its issuance.

[10] "Report on Reporting the Effects of Changing Prices," *CA Magazine* (April 1985), 6.

## AUSTRALIAN STATEMENT OF ACCOUNTING PRACTICE

After promulgating several exposure drafts and statements of provisional accounting standards on accounting for the effects of changing prices, the Australian accounting profession issued a proposed Statement of Accounting Standards on *Current Cost Accounting* in 1982.[11] The proposed standard applies to large, publicly traded companies, as well as large government and semi-government business undertakings, according to paragraph 8.

According to Australia's proposed *Statement of Accounting Standards on Current Cost Accounting (CCA),* "the objective of financial reporting is to satisfy needs of users for relevant information on the economic affairs of a business entity" (par. 2). This statement acknowledges the deficiencies of the conventional accounting framework during periods of changing prices and suggests the recognition of the impact of the changes in the prices of specific goods or services currently needed by the firm.

The proposed statement asserts that "the objective of CCA is to ensure that, having regard to changes in specific prices, the results and resources of an entity are realistically measured so as to be of maximum value to users." More specifically, the proposal claims that the current cost information will assist investors, managers, and other users in better assessing the economic performance of the entity (as measured by its profitability), the financial viability of the entity, and dividend policies. In addition, CCA information is also supposed to "assist management in optimizing its use of resources, in cost control, in determination of pricing policies, and capital-raising decisions" (par. 7).

To meet these aims, the proposed statement requires the computation of income and the presentation of the balance sheet on a current cost or lower recovery basis. In paragraph 52g, the proposed statement asserts that:

> "Recoverable amount," in relation to an asset, means the net amount that is expected to be recovered:
> (i) from the total cash inflows less the relevant cash outflows arising from its continued use;
> and/or
> (ii) through its sale.

Although nothing is said of present valuation in the foregoing definition, Gynther, who was a member of the Australian CCA

[11] Australian Society of Accountants and The Institute of Chartered Accountants in Australia, *Statement of Accounting Practice No. 1.*

Standards Committee that prepared the proposed statement, contends that discounting is implicit in the definition:

> I believe that the Australian [definition] . . . (apart from the discounting matter) is more precise than those of the UK, USA, etc. I think the Australian definition is the only one that covers the situation where it is the intention to employ an asset for (say) two years and then sell it. *Both* the future cash flows from use and the estimated eventual selling value need to be included in "Recoverable Amount" in such a case. The "and/or" in the Australian definition does this. In such cases *both* the cash flows from its use and its estimated sale value would need to be discounted.[12]

Gynther asserted that the definitions of recoverable amount in SFAS No. 33 and SSAP No. 16 are deficient inasmuch as they fail to consider expected selling prices of assets after a period of usage.[13]

The Australian proposed standard is based on the concept of physical capital maintenance, which provides a measure of income that the enterprise can distribute as dividends while maintaining its operating capability. The current cost data are to be presented as supplemental information together with a statement of changes in shareholders' equity on a current cost basis with specific explanatory notes in addition to the conventional financial statements. This proposed statement does not, however, preclude the presentation of current cost accounting (CCA) financial statements as the principal financial statements; in this respect, the Australian and British pronouncements are alike. On the other hand, the current cost data are expected to be disclosed only as supplementary information according to the American and Canadian standards.

The Australian proposed statement defines current cost of an asset as "its cost measured by reference to the lowest cost at which the gross service potential of that asset could currently be obtained in the normal course of business." Gynther contends that the current cost of an asset should reflect the reproduction costs of assets currently held, even if reproduction cost per unit of service potential exceeds replacement cost per unit of service potential because profit measurement should reflect what the entity actually did with the assets it had during the past period rather than what it may have done.

One distinctive feature of the Australian CCA standard is that it does not show the CCA profit attributable to common share-

[12] R. S. Gynther, Correspondence with the authors (22 April 1985).
[13] Ibid.

holders in the CCA profit and loss statement proper. Recall that SSAP No. 16's CCA income statement shows both the current cost income of the enterprise and the current cost income attributable to common shareholders in the same statement. It is important to note, however, that the Australian proposal calls for additional disclosure as a note to the CCA profit and loss statement of information that may enable interested readers to determine the current cost income attributable to common stockholders. This is done by adding the "gain of loan capital" to the CCA net profit. "Loan capital," as defined by the Australian statement, is the amount borrowed for financing the operating capability of an entity; it includes the current portion of long-term debt but excludes other current monetary liabilities. This gain on loan capital is a gearing adjustment for all intents and purposes.

The purpose of the Australian CCA standard is to provide useful information by stating the value of the resources of the firm and the results of its operations. During periods of changing prices, the conventional balance sheet, which is based on the historical cost principle, has serious limitations in conveying relevant measures of the assets of a firm. In this respect, the current cost supplementary data should be beneficial to users of financial reports. The Australian CCA profit is based on the concept of physical capital maintenance, which implies that the reported current cost income is the amount the firm can distribute as dividends while maintaining its operating capacity. Such a measure of income is presumed to be relevant to users who are interested in making predictions about cash flows of the firm. In this respect, the Australian proposal appears to require information consistent with its purposes. However, the proposed standard also shares the same weakness as the other standards in its method of computation and treatment of purchasing power gains and losses from holding debt during inflationary periods. Another deficiency in the proposed Australian CCA system is that it does not deal with the measurement unit problem. Although this problem is not particularly serious with the CCA model in dealing with a given time period, the need for a constant unit of measurement is evident for interperiod comparative analysis. SSAP No. 16 is characterized by the same shortcoming. On the other hand, both the U.S. and Canadian standards call for the use of constant dollars in presenting comparative financial data. To provide a comprehensive solution to the problem of accounting for changing prices, it is necessary to address the measurement unit problem.

The 1982 proposed Statement of Accounting Standards has finally been released by the Australian Society of Accountants and the Institute of Chartered Accountants in Australia, as *Statement of Accounting Practice No. 1 (SAP 1): Current Cost Accounting.* It is virtually the same as the 1982 proposed standard except that as a statement of accounting practice, it is a "strong recommendation," and as such it is nonmandatory as opposed to a statement of accounting standards, which is mandatory. As a recommendation, SAP No. 1 "places a professional responsibility on members to seriously consider the proposals and to work positively towards a solution to the problems which those proposals are designed to solve." SAP No. 1 calls for the preparation of CCA financial statements by all entities on an experimental basis, either as the primary accounts or on a supplementary basis. The CCA financial statements are to include an income statement, a balance sheet, and a statement of change in shareholders' equity and explanatory notes. The experimental nature of SAP No. 1 is meant to provide firms preparing CCA information with the latitude to develop and implement their systems gradually.

## RECAPITULATION

Among the accounting pronouncements included in this study, the American and Canadian standards go to great length to clarify their purposes and explain how the disclosure provisions satisfy these aims. To a lesser degree, both the British SSAP No. 16 and the latest Australian standard state their purposes with their respective disclosure provisions.

In comparing the U.S., British, Canadian, and Australian price-level accounting standards and proposals, the following can be asserted.

The U.S. and Canadian standards have almost identical objectives. Nonetheless, there is a key difference in the purposes of the Canadian standard and SFAS No. 33. Although both documents include "the maintenance of the operating capability of the enterprise" as a stated aim, the Canadian standard specifically contains an additional objective on the "maintenance of the operating capability of common shareholders" unlike the U.S. standard. In fact, the Canadian standard appears to have "borrowed" a great deal from SFAS No. 33. On the other hand, there is considerable similarity between SSAP No. 16 and the 1982 Australian Proposed Standard.

Both the U.S. and Canadian documents have specifically stated

their intent to provide information useful for predicting cash flows. The British and Australian statements do not explicitly call for the provision of information that users may find relevant in assessing future cash flows. Nevertheless, both the U.K. and Australian approaches assert the importance of providing useful information for managerial decision making. In the United States and Canada, the accounting standard-setting authorities are primarily concerned with establishing accounting standards for external reports. This might explain, therefore, why no reference is made in the U.S. and Canadian standards to information for managerial decision-making purposes.

The U.S. and Canadian standards require information dealing with purchasing power gains and losses on holding monetary items as separate supplementary disclosures. The U.K. and Australian standards, on the other hand, do not require such information. The Australian document does, however, call for information on purchasing power gains and losses from holding monetary items as a footnote disclosure in connection with the computation of its monetary working-capital adjustments. In all of the standards considered here, the computation and the treatment of gains and losses on holding debt during inflation are notably deficient.

The U.K.'s SSAP No. 16 requires the disclosure of information as to "gearing" as one of its asserted aims. A similar provision is also required to meet one of the stated aims of the Canadian standard, dealing with information to assess the "maintenance of operating capability financed by common shareholders." To accomplish this objective, the Canadian standard recommends a "financing adjustment," which is similar to the British "gearing adjustment." These adjustments are designed to reflect the benefit or cost to common stockholders from financing a portion of a firm's operating assets through debt in a period of changing prices. SFAS No. 33 does not contain this purpose; nor does SFAS No. 33 require disclosure of a gearing or financing adjustment. Nevertheless, SFAS No. 33 does assert the purpose of providing information presumed to be useful in assessing the erosion of the firm's operating capabilities. In a marked departure from an earlier exposure draft, the recent Australian proposed standard does not show any gearing adjustment in the main body of the CCA income statement, which is primarily designed to report the CCA income of the enterprise. In what appears to be a compromise solution, however, the Australian pronouncement mandates the disclosure of "gains and losses on loan capital," which, in effect, is equivalent

to a gearing or financing adjustment for the benefit of those readers who might be interested in the income attributable to common stockholders. While the American and Canadian standards are neutral on the concept of capital maintenance, SSAP No. 16 and the Australian proposed standard appear to emphasize the concept of maintaining operating capability as a common objective.

SFAS No. 33 is the only standard that requires the disclosure of supplementary HC/CD data in addition to current cost information; however, SFAS No. 82 eliminates the HC/CD requirement for companies reporting current-cost/constant-dollar information. In other respects, the U.S. and Canadian standards are alike. Both standards attempt to reflect the effect of specific price changes and the impact of general price-level changes on the general purchasing power of the monetary unit. There are striking similarities between SSAP No. 16 and the proposed Australian standard. All the pronouncements considered call for supplementary current cost data or lower recoverable (i.e., deprival) amounts. However, the defintions of deprival value vary somewhat from pronouncement to pronouncement. Neither the British nor the Australian statement explicitly refers to present valuation in defining lower recovery amount in contrast to the American and Canadian standards. The Australian statement is the only one that refers to the expected selling price of the asset(s) subsequent to a period of usage.[14] None of the pronouncements examined in this paper calls for the measurement of liabilities in terms of current cost. With the exception of SSAP No. 16, all the pronouncements require the disclosure of general purchasing power gains or losses on holding monetary items.

Unlike SSAP No. 16 and the Australian proposed standard, SFAS No. 33 and the Canadian standard do not require a monetary working-capital adjustment in measuring the current cost income of the entity. As stated earlier, SSAP No. 16 requires a gearing adjustment in the CCA profit and loss statement. There is no gearing provision in SFAS No. 33, although the British and Canadian standards, as well as the Australian proposal, call for a gearing or financing adjustment to be disclosed for the benefit of users who may be interested in computing income attributable to shareholders.

SFAS No. 33 requires income from continuing operations both on current cost and general price-level–adjusted bases. The Canadian standard and the Australian proposed standard, on the

[14] Ibid.

other hand, require a current cost income statement primarily designed to show the current cost income of the enterprise. In contrast, the U.K.'s SSAP No. 16 requires a two-stage current cost income statement showing (1) current cost operating profit, and (2) current cost profit attributable to shareholders.

Both the U.K. and Australian statements require a current cost balance sheet, which can be presented either as a supplementary or primary statement, whereas the U.S. and Canadian standards require only the disclosure of balance sheet items on a current cost basis with holding gains on monetary items reflected net of general inflation.

Only the U.S. and Canadian standards require the restatement of comparative financial data in terms of constant dollars. There is no mandatory requirement to present comparative data stated in a common unit of measurement in the British and Australian CCA accounting pronouncements. British enterprises are encouraged (SSAP No. 16, par. 37) to provide comparative figures adjusted to a common price basis.

The disclosure provisions generally appear to be consistent with the objectives in the pronouncements and proposals covered in this study. The only exception where we were unable to find a satisfactory link was with regard to the HC/CD data that are required by SFAS No. 33. Restatement of historical cost data using a general index results in data that are hard to interpret. In most other instances, while one might take issue with particular disclosure requirements, there is a consistency between the purposes and the disclosure provisions. Failure to require a properly computed monetary working-capital adjustment in both the U.S. and Canadian standards results in an incomplete CCA income measure, one that is less than fully consistent with the objective of maintaining the operating capability of the firm. It should be emphasized that both SFAS No. 33 and the Canadian standard are neutral on the concept of capital maintenance. All the standards considered in this paper are deficient in their treatment of the impact of changing prices on holding debt.

## CONCLUSION

This paper has analyzed and compared the objectives and reporting requirements underlying the price-level accounting methods that have been recently issued or proposed in the United States, Britain, Canada, and Australia. An understanding of the objectives proposed in these documents provides a framework for evaluating the

internal consistency of a given pronouncement and enhances our understanding of the reporting differences that exist among the different countries.

This comparative analysis reveals points of tangency among pronouncements and proposed standards. The stated objectives and reporting requirements enunciated in these statements are generally similar. As evidenced by all the similarities among the pronouncements, there has been a considerable international exchange of ideas on inflation accounting.

The price-level accounting standards that have been adopted in the United States, the United Kingdom, and Canada apply to large publicly held companies. These countries have highly developed capital markets, although perhaps with varying degrees of efficiency. Based on these observations, it can be hypothesized that the financial reporting environment among these countries is essentially similar, and consequently the objectives of financial statements and the nature of required information ought to be similar as our analysis confirms to a large extent.

For publicly held companies, the overriding concern for external reporting purposes should be to provide relevant information for investment decisions. Such information should assist prospective investors in the assessment of cash-flow prospects. The American and Canadian standards appear to be keenly aware of the need to provide investor-oriented information. On the other hand, the British and Australian documents do not explicitly emphasize the objective of providing information to assist investors in assessing the amounts, timing, and uncertainty of future cash flows.

# *Contrasting Income Treatment of Monetary Items in Recent Accounting Standards in New Zealand, the United Kingdom, and the United States*

DAVID PENDRILL*

After many years of discussion, three countries in the English-speaking world now have accounting standards which attempt to address the problem of changing prices in financial accounting. These countries are New Zealand, the United Kingdom, and the United States.

The first of the three statements of standard accounting practice to be adopted was Statement No. 33, "Financial Reporting and Changing Prices," issued by the Financial Accounting Standards Board (FASB) in the United States in September 1979. It required large companies to provide supplementary information revealing the effects of price changes for reporting years after December 25, 1979. Companies could, if they wished, also prepare a set of supplementary accounts, but this was not mandatory.

The second standard, "Statement of Standard Accounting Practice No. 16: 'Current Cost Accounting' " (SSAP No. 16), was issued in March 1980 by the United Kingdom's Accounting Standards Committee. This required listed and large companies to prepare supplementary current cost accounts for accounting years starting on or after January 1, 1980.

The most recent standard, CCA-1, "Information Reflecting the Effects of Changing Prices," was issued by the New Zeland Society

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of Accountants in March 1982 and required companies listed on the New Zealand Stock Exchange to prepare supplementary current cost accounts for accounting years beginning on or after April 1, 1982. This standard opts for a preferred method of preparing the current cost accounts, and this method is illustrated in the Guidance Notes (GU-4), which were issued at the same time as the standard. This article considers this preferred method and does not consider the alternative method illustrated in the second set of Guidance Notes (GU-7) issued subsequently in December 1982.

Given the long periods involved in reaching agreement on the three respective standards, the common language and the links between the professional accountancy bodies in the three countries, we would expect the later standards to have benefited from the knowledge of and practical experience with the earlier standards. This would be particularly so with the New Zealand (N.Z.) statement. In fact, we find that CCA-1 is specifically stated to be based on SSAP No. 16. In spite of this, CCA-1 differs significantly from SSAP No. 16.

Although considerable agreement exists between the three standard-setting bodies on the most appropriate methods for valuing assets and liabilities in a balance sheet, much less agreement exists on how to measure the profit for a period. In part, this is due to the adoption of different capital maintenance concepts, but this does not provide a full explanation for the existing differences.

This article focuses on one of the major areas of difference between the three standards, the treatment of monetary items in the context of profit measurement. An attempt is made to describe the differences which exist and to explain why the various approaches have been adopted.

All three standards are experimental and are to be reviewed after a period of practical experience. When each standard-setting body undertakes its review, it will undoubtedly consider the results of similar experiments in other countries. The article concludes by highlighting questions which might usefully be addressed as part of this review process.

## CONTRASTING APPROACHES

All three standards operate within the traditional framework of a balance sheet and profit and loss statement, although the FASB statement does not actually require the preparation of a full set of accounts. Thus, they all contain rules on the valuation of assets and liabilities and on the determination of various components of profit.

**Balance Sheet Valuation**

Both SSAP No. 16 and CCA-1 require that tangible assets and intangible assets other than goodwill be shown at their values to the business. This is defined identically in these two statements[1]:

(a) net current replacement cost; or, if a permanent diminution to below net current replacement cost has been recongized,
(b) recoverable amount.
Recoverable amount is, in turn, defined as the greater of the net realizable value of an asset and, where applicable, the amount recoverable from its further use.

FASB Statement No. 33 requires that enterprises disclose the current cost amounts of inventory and property, plant and equipment at the end of the current fiscal year.[2] The current cost amounts are defined as current cost or lower recoverable amount.[3] Lower recoverable amount is defined, in turn, as the current worth of the net amount of cash expected to be recoverable from the use or sale of the asset.

Although FASB terminology is particularly clumsy, and it is possible to interpret "net current replacement cost" and "current cost" differently, the underlying valuation concept of all three standards is clearly that which is described in the academic accounting literature as "deprival value" or "value to the business."[4] In the case of SSAP No. 16 and CCA-1, this valuation base is to be applied to land and buildings, plant and machinery, stock and intangible assets other than goodwill; under the FASB statement, it is to be applied to inventory and property, plant and equipment. Thus, the application is somewhat wider under SSAP No. 16 and CCA-1.

The three standards are in full agreement as to the treatment of monetary assets and liabilities. No adjustments are to be made to the amount at which they appear in the historical cost accounts. It is therefore possible to criticize all three standards for adopting such an asymmetrical approach to valuation. Because they require that the major real assets be shown at their "value to the business," symmetry would require that monetary assets and liabilities be shown on the same basis. Although the figures for most short-

[1] SSAP No. 16, par. 42, and CCA-1, par. 3.5.
[2] FASB Statement No. 33, par. 30b.
[3] Ibid., par. 51.
[4] The latter term is actually used in SSAP No. 16 and CCA-1, but it is also clearly recognized in Appendix C to FASB Statement No. 33, par. 99h: ". . . the terms 'value to the business,' 'deprival value,' and 'current cost or lower recoverable amount' all have the same meaning."

term monetary assets and liabilities which appear in historical cost accounts may represent their value to the business, it is extremely unlikely that the values of long-term liabilities included in historical cost accounts represent the value to the business of those liabilities in a period in which interest rates and inflation rates have fluctuated considerably.

In making this criticism, we must, however, recognize that the theoretical work on the valuation of liabilities is much less developed than that on the valuation of assets.[5] Not surprisingly, not one of the three standards has grasped this nettle at this particular time.

#### Profit Measurement

In this area, the major differences emerge. These differences are best approached by considering the information which is required by the respective standards.

**FASB Statement No. 33.** This statement requires an enterprise to disclose the information shown in Exhibit 1.[6]

Thus, FASB Statement No. 33 requires the disclosure of the income from continuing operations on both a historical cost/constant dollar basis (par. 29a) and a current cost basis (par. 30a). The former considers inflation, but the latter reflects movements

**Exhibit 1. Part of Information Required by FASB Statement No. 33**

<u>Paragraph 29</u>

a. Information on incomes from continuing operations for the current fiscal year on a historical cost/constant dollar basis.

b. The purchasing power gain or loss on net monetary items for the current fiscal year.

The purchasing power gain or loss on net monetary items shall *not* be included in income from continuing operations.

<u>Paragraph 30</u>

a. Information on income from continuing operations for the current fiscal year on a current cost basis.

c. Increases or decreases for the current fiscal year in the current cost amounts of inventory and property, plant, and equipment, net of inflation.

The increases or decreases in current cost amounts shall *not* be included in income from continuing operations.

[5] An example of theoretical work on the valuation of liabilities is provided in D. Kulkarni, "The Valuation of Liabilities," *Accounting and Business Research* (Summer 1980).

[6] Subparagraph (b) of par. 30 concerns the valuation of assets and has been dealt with earlier.

in the specific prices of the inputs used to generate revenues recognized in the current period.

The income from continuing operations on a current cost basis may be obtained by deducting the current cost of inputs from revenues, thus excluding realized holding gains from this profit. If we define the difference between depreciation based on current cost and depreciation based on historical cost as a depreciation adjustment, and the difference between the current cost of sales and the historical cost of sales as a cost of sales adjustment, the income from continuing operations on a current cost basis will then be determined as follows:

| | | |
|---|---|---|
| Income from continuing operations after interest and tax on historical cost basis | | X |
| Current cost adjustments | | |
| Depreciation adjustment | X | |
| Cost of sales adjustment | X | |
| | | X |
| Income from continuing operations after interest and tax on a current cost basis | | X |

That holding monetary assets and liabilities in a period of inflation results in losses and gains is widely recognized. Under the FASB statement, these losses and gains are measured by reference to the rate of inflation as measured by a general index, the Consumer Price Index for All Urban Consumers, and the net gain or loss is disclosed (par. 29b).

The fourth item which must be disclosed is the increase or decrease in the current cost amounts of certain assets net of inflation. The enterprise is required to report the holding gains which have accrued in the current year, whether realized or unrealized, after reflecting changes in the general purchasing power of money to report the "real" holding gains or losses of the period.

FASB Statement No. 33 does not require companies to report a final profit figure. Rather, it permits users to select individual items or to combine items from the information disclosed to report any of a number of profit figures which might be considered relevant. The following are some possibilities:

1. Profit of the enterprise after maintaining physical capital:
   Income from continuing operations on a current cost basis.

| | |
|---|---|
| | X |

2. Profit of the shareholders using historical cost values in the balance sheet and real capital maintenance in the income statement:

| | |
|---|---|
| Income from continuing operations on a historical cost/constant dollar basis. | X |
| plus | |
| Purchasing power gain or loss on net monetary items for the current fiscal year | X |
| | X |

3. Profit of the shareholders using current values in the balance sheet and real capital maintenance in the income statement:

| | |
|---|---|
| Income from continuing operations on a current cost basis | X |
| Purchasing power gain or loss on net monetary items | X |
| Real holding gains, realized and unrealized, on holding assets | X |
| | X |

**SSAP No. 16/CCA-1.** We find a fundamental difference from the FASB approach. The items disclosed in accordance with FASB Statement No. 33 account for inflation and/or changes in specific prices, but SSAP No. 16 and the preferred method of CCA-1 do not require any adjustment for inflation.[7] They require only the adjustment for movements in specific prices, although they do permit the inclusion of further voluntary statements which do account for inflation. An example of the current cost profit and loss account required by SSAP No. 16 and CCA-1 is shown in Exhibit 2.[8]

This profit and loss account includes two principal levels of profit, the current cost operating profit and the current cost profit attributable to shareholders.

The current cost operating profit is the profit after maintaining the operating capability of the business. Operating capability is considered to be represented by fixed assets, stocks, and monetary working capital. Thus, the first level of profit is calculated after

[7] This failure to consider inflation dates back to U.K. Sandilands Report, "Inflation Accounting," which refused to recognize any such phenomena as inflation, on the grounds that each individual experiences his own rate of "inflation," depending on how he spends his money. This refusal to recognize a measure of the average rate of price change has led to many difficulties in the development of the U.K. statement of standard practice in this area.

[8] Some flexibility of layout is permitted by both SSAP No. 16 and CCA-1.

**Exhibit 2. SSAP No. 16/CCA-1: Example of Presentation of Current Cost Profit and Loss Account**

| | | |
|---|---|---|
| Turnover | | X |
| Profit before interest and taxation of the historical cost basis | | X |
| Current cost operating adjustments | | |
| Depreciation adjustment | X | |
| Cost of sales adjustment | X | |
| Monetary working capital adjustment | X | X |
| Current cost operating profit | | X |
| Gearing adjustment | X | |
| Interest payable less receivable | X | |
| | | X |
| Current cost profit before taxation | | X |
| Taxation | | X |
| Current cost profit attributable to shareholders | | X |

charging not only a depreciation adjustment and a cost of sales adjustment as under the FASB proposals, but also a monetary working capital adjustment. This monetary working capital adjustment attempts to measure the increase or reduction in the amount of monetary working capital necessary as a result of specific price changes in the period. As we shall see, it may reduce or increase profit.

Under FASB Statement No. 33, the profit from continuing operations on a current cost basis is calculated after charging the current costs of physical assets consumed, but the current cost operating profit of SSAP No. 16 and CCA-1 is calculated after charging the current cost of the physical assets consumed *and* monetary working capital adjustment. Due to the subsequent method in which gains or losses on monetary items are handled, the current cost income under the FASB statement is calculated after charging interest and tax; under SSAP No. 16 and CCA-1, it is calculated before charging interest and tax.

To arrive at the second level of profit, the current cost profit attributable to shareholders, the benefits or disbenefits of using borrowings to finance the net operating assets of the business must be reflected. These benefits or disbenefits are measured by the gearing (trading on the equity) adjustment.

To calculate the monetary working capital adjustment and the gearing adjustment required by SSAP No. 16 and CCA-1, the

items in the balance sheet must first be rearranged into the categories shown in Exhibit 3. Monetary assets and liabilities must be classified either as part of monetary working capital or as part of net borrowings. Under both SSAP No. 16 and CCA-1, net borrowings form the residual category of monetary items and may be determined only after the items which form part of monetary working capital have been determined.

Monetary working capital may be either positive or negative, that is to say, a net asset or a net liability. The impact of the monetary working capital adjustment on profit will then depend on whether the specific prices experienced by the firm are rising or falling, as illustrated in Exhibit 4. If monetary working capital is a net liability in excess of the value of stocks, the excess is regarded as financing fixed assets and is treated as part of net borrowings.

Net borrowings consist of all monetary assets and liabilities other than those included in monetary working capital. Again, net borrowings may be positive (i.e., a net liability) or negative (i.e., a net asset). If there is a net liability, a gearing adjustment is necessary to attempt to measure the gain from borrowing if specific prices are rising or the loss from borrowing if specific prices are falling. If, however, there is a net asset, this is not regarded as part of the net operating assets of the business and thus falls outside the scope of SSAP No. 16 and CCA-1. As we shall see, due to the different ways in which they define monetary working capital, the existence

**Exhibit 3. Classification of Balance Sheet Items**

| Financing | | Net operating assets | |
|---|---|---|---|
| Shareholders' interest | X | Fixed assets | X |
| | | Stocks | X |
| Net borrowings | X | Monetary working capital | X |
| | X | | X |

**Exhibit 4. Effect of MWCA on Profit**

| | Monetary working capital | |
|---|---|---|
| Movement of specific prices | Positive | Negative |
| Rising | Reduction | Increase |
| Falling | Increase | Reduction |

of a net asset under CCA-1 is very unlikely, although it is certainly possible under SSAP No. 16.

Before the monetary working capital adjustment and the gearing adjustment are examined in more detail, the basic approaches to monetary items of the FASB statement and the two other statements are compared.

FASB Statement No. 33 requires the measurement of the gain or loss on *all* monetary items using the change in the purchasing power of money as measured by a general index of consumer prices.

SSAP No. 16 and the preferred method of CCA-1 require the analysis of monetary items in two stages. First, monetary items must be segregated into two categories: monetary working capital and net borrowings. Then, a monetary working capital adjustment and, providing net borrowings are a net liability, a gearing adjustment are computed. No reference is made to inflation; both adjustments are intended to reflect the movement in specific prices experienced by the firm. If net borrowings are negative, no adjustment is required whatsoever.

The treatment of monetary items under the FASB statement is comprehensive and based on general price change, but the treatment of monetary items under SSAP No. 16 and CCA-1 is not comprehensive and is based on specific price change.

## MONETARY WORKING CAPITAL ADJUSTMENT

The purpose of this adjustment is to measure the increase or reduction in the monetary working capital needed to finance the activities of the business due to changes in the input prices of goods and services. Given there is little theory which informs us as to how to compute the amount of monetary working capital necessary to support a given level of activity, both SSAP No. 16 and CCA-1 have had to define monetary working capital by reference to the items which appear in a company's balance sheet. However, the definitions adopted differ from one another.

SSAP No. 16, paragraph 44, defines monetary working capital as

> the aggregate of:
> (a) trade debtors, prepayments and trade bills receivable, plus
> (b) stocks not subject to a cost of sales adjustment, less
> (c) trade creditors, accrual and trade bills payable,
> insofar as they arise from the day-to-day operating activities of the business as distinct from transactions of a capital nature. Bank balances and overdrafts may fluctuate with the volume of stock or the items in

(a), (b) and (c) above. That part of bank balances or overdrafts arising from such fluctuations should be included in monetary working capital, together with any cash floats required to support day-to-day operations of the business, if to do so has a material effect on the current cost operating profit.

SSAP No. 16 appears to recognize that the levels of monetary items which appear in a balance sheet may not be "needed." Although this may be true of all items, it is particularly acute in the case of bank balances and overdrafts and, to avoid the problem of deciding how much of the bank balances are monetary working capital, SSAP No. 16 attempts to exclude such balances from the definition. It then recognizes that this may lead to meaningless adjustments in some cases and permits their inclusion in certain circumstances. This immediately introduces the necessity to exercise judgment in deciding what part of the balance is monetary working capital. This has given rise to major problems in practice. As mentioned elsewhere, any attempt to make a meaningful adjustment involves a great number of difficult steps.[9] These include removing the profit element from debtors, deciding which specific numbers are appropriate for the components of monetary working capital, and determining the average period of credit taken by debtors and from creditors in order to apply the correct average index numbers.

CCA-1 attempts to avoid many of these problems by taking a much less precise approach to the adjustment. Paragraph 3.9 of CCA-1 defines monetary working capital as:

the aggregate of:
(a) trade accounts receivable, prepayments and trade bills receivable, cash and bank balances, plus
(b) inventories not subject to a cost of sales adjustment, less
(c) trade accounts payable, accruals and trade bills payable, and bank overdrafts.

Thus, CCA-1 includes cash and bank balances and bank overdrafts within the definition and, thereby, avoids the difficult decision of how much should or should not be included. The need for subjective judgment in this area is avoided, although it may be argued that it may result in a rather suspect adjustment where, for example, large amounts of surplus funds are retained in the bank, even though they are not part of the "necessary" monetary working capital. In addition, the Guidance Notes to CCA-1 provide a much less precise approach to computing the adjustment. They

[9] "Difficult Steps to Negotiate," *Accountancy* (June 1982).

do not mention the need to remove the profit element from debtors, and they recommend that, although in principle a separate index should be used to adjust each item of monetary working capital, companies should use only one specific price index to make the adjustment. This should be either (a) an input or output index from the appropriate industry group in the Producers Price Index series; or (b) the Producers Price Index, all industry inputs.[10]

CCA-1 has taken a much rougher approach to the monetary working capital adjustment than SSAP No. 16 to avoid many of the practical difficulties to which the monetary working capital adjustment (MWCA) of SSAP No. 16 has given rise.

Any monetary items which are not included within the definition of monetary working capital must be included in net borrowings. Given the different definitions of monetary working capital, it follows that SSAP No. 16 and CCA-1 have different definitions of net borrowings. In both cases, the heading comprises a motley collection of items such as long-term loans, taxation payable, deferred taxation, and creditors for capital expenditure. In the case of SSAP No. 16, cash and bank balances not considered to be part of monetary working capital will be deducted.

### GEARING ADJUSTMENT

The gearing adjustment attempts to measure the gain or loss which shareholders make when the firm uses net borrowings to finance assets which rise or fall in value. Such a gain or loss is determined by reference to the movements in the specific prices of the assets held and is illustrated in a simple example.[11]

Assume a company, financed in equal proportion by ordinary share capital and an interest-free loan, commences to trade by purchasing ten items of stock for \$10 each on 1 January 1982. The balance sheet immediately after this purchase is indicated at the top of Exhibit 5.

The company holds the stock for one month and sells all ten items for \$15 each on 31 January. In January, the replacement cost of each item of stock is increased by suppliers by 30 percent to \$13. Thus, by purchasing on 1 January rather than 31 January, the company has a holding gain of \$30 (i.e., ten items at \$3 each), and this is realized when the stock is sold on 31 January. Such a realized holding gain is described as a cost of sales adjustment by

[10] Guidance Notes on CCA-1, par. 89.

[11] This example is taken from David Pendrill, "An Indefensible Stance," *Accountancy* (July 1982).

the standard, and does not form part of the current cost operating profit. This is reported in the first part of the current cost profit and loss account in Exhibit 5. But this is not the whole story so far as the shareholders are concerned.

The stock which has given rise to the realized holding gain has been financed in equal proportion by shareholders and loan holders. Loan holders do not share in any way in the gains. Thus, the shareholders have made a profit from using a monetary liability to finance a real asset, which has risen in value. The gearing proportion is 50 percent, and hence, the gearing gain is 50 percent of the total holding gain, that is, 50 percent of \$30 = \$15, which is added to the current cost operating profit to arrive at the current cost profit attributable to shareholders.

If we assume, for simplicity, that all transactions are for cash and that the resulting figure is distributed as dividend on 31 January, the current cost balance sheet after the distribution will appear as shown at the bottom of the table. Total shareholders'

**Exhibit 5. Example to Illustrate the Gearing Adjustment**

| | | |
|---|---|---|
| Opening balance sheet on 1 January 1982 | | |
| | | $ |
| Ordinary share capital | | 50 |
| Loan | | 50 |
| Ten items of stock at \$10 each — at cost | | 100 |
| Current cost profit and loss account for January 1982 | | |
| | $ | $ |
| Sales revenue (10 @ \$15) | | 150 |
| less current cost of sales: | | |
| Historic cost | 100 | |
| Cost of sales adjustment | 30 | 130 |
| Current cost operating profit | | 20 |
| add gearing adjustment | | 15 |
| Current cost profit attributable to shareholders | | 35 |
| Current cost balance sheet on 31 January 1982 | | |
| Shareholders' interest | | |
| Ordinary share capital | | 50 |
| Current cost reserve \$(30-15) | | 15 |
| | | 65 |
| Loan | | 50 |
| | | 115 |
| Cash \$(150-35) | | 115 |

interest has been increased by 30 percent to $65, which reflects the rise in specific prices experienced by the company, while the gearing ratio has fallen when compared to that at the beginning of the month. It would be possible for the business only to replace the ten items of stock at the higher replacement cost if it were able to borrow the gearing gain of $15 and thus restore the gearing ratio to 50 percent.

In the real world, the adjustment is not so simple. Not only will the gearing proportion change from day to day, but also holding gains which are realized in the current period may have accrued in previous periods while holding gains accrued in this period may not be realized at the end of the period. SSAP No. 16 and CCA-1 cope with these problems in different ways.

SSAP No. 16, paragraph 50, requires the gearing adjustment to be calculated by

(a) expressing net borrowing as a proportion of the net operating assets using average figures for the year from the current cost balance sheets; and
(b) multiplying the total of the charges or credits made to allow for the impact of the price changes in the net operating assets of the business by the proportion determined at (a).

Thus, SSAP No. 16 requires us to apply the average gearing proportion to the current cost operating adjustments as shown in the current cost profit and loss account. These are the realized holding gains on fixed assets and stocks and the monetary working capital adjustment.

CCA-1, paragraph 4.11, requires that the gearing adjustment be calculated by

(a) Expressing net borrowing as a proportion of the net operating assets using average figures for the period from the current cost balance sheets; and
(b) Multiplying the net total of entries made to the current cost reserve for this same year by the proportion determined at (a).

CCA-1 therefore requires that we apply the average gearing proportion for the period to the movement in the current cost reserve for the year.

The differences in approach may be better understood if the causes of changes in the current cost reserve are noted. This may be illustrated by analyzing typical movements in a current cost reserve account (Exhibit 6).

The depreciation adjustment is the difference between depreciation based on current cost and depreciation based on historical

**Exhibit 6. Movements in Current Cost Reserve for the Year to December 31, 1982**

| | Total | Unrealized | Realized | |
|---|---|---|---|---|
| Unrealized holding gains on December 31, 1981 realized during current year: | | | | |
| Fixed assets depreciation | — | (1,100) | 1,100 | Dep. adj. |
| Stock | — | ( 100) | 100 | COSA* |
| Holding gains accrued and realized in current year: | | | | |
| Fixed assets — depreciation | 120 | | 120 | Dep. adj. |
| Stock | 600 | | 600 | COSA |
| MWCA | 150 | | 150 | |
| Unrealized holding gains at December 31, 1982 accrued during 1982: | | | | |
| Fixed assets | 600 | 600 | | |
| Stock | 140 | 140 | | |
| | 1,610 | ( 460) | 2,070 | |

* Cost of sales adjustment

cost and comprises the two items indicated in the right-hand column above. It comprises realized holding gains which have accrued in previous years and in the current year but excludes unrealized holding gains which have accrued in the current year. Similarly, the cost of sales adjustment is the difference between the current cost of sales and the historical cost of sales. It includes the two items marked in the right-hand column and includes realized holding gains which have accrued in previous years and in the current year but excludes holding gains unrealized at the year end.

SSAP No. 16 would require application of the gearing proportion to the total of column 3 while CCA-1 would require application of the gearing proportion to the total of column 1. Only the latter adjustment would appear to result in a meaningful adjustment.

To apply the average gearing proportion for the current period to the holding gains which have accrued in the current period provides a logically consistent gearing adjustment. However, to apply the average gearing proportion for the current period to holding gains which have accrued not only during the current period but also over many previous periods, when the gearing proportion may have been very different, results in a gearing

adjustment lacking any rational interpretation. Only if the gearing proportion has remained constant for the entire holding period would the figure make any sense, and this is unlikely, particularly given the manner in which the gearing proportion is calculated. The numerator, net borrowings, is a residual category of monetary items.

Under both SSAP No. 16 and CCA-1, it is necessary to apply the gearing proportion to the monetary working capital adjustment. The reason for this is not clearly explained in either document but presumably results from an implicit assumption that any additional or reduced amount of finance required for monetary working capital will be provided in part from net borrowings, the part being the current gearing proportion. This seems a questionable assumption but one which is applied in both SSAP No. 16 and CCA-1.

## SUMMARY

None of the standards has required any alteration to the balance sheet values of monetary items shown in historical cost accounts, but all have attempted to deal with the impact of monetary items on the measurement of periodic profit. All three standards attempt to report what may be described as the current cost profit of the enterprise, a profit of the entity based on a concept of physical capital maintenance. Under FASB Statement No. 33, the physical capital is restricted to physical assets. Under both SSAP No. 16 and CCA-1, the physical capital or net operating assets consist of physical assets and the monetary working capital necessary to support a particular level of physical activity. SSAP No. 16 and CCA-1 adopt different definitions of monetary working capital and, although the definition of CCA-1 will undoubtedly be the easier to apply in practice, it is not difficult to think of circumstances where the resulting adjustment may be rather suspect.

The profit and loss account provides us with more differences. FASB Statement No. 33 requires the calculation of the net gain or loss on holding monetary items by reference to movements in a general index. These monetary items will include borrowings and hence any gain or borrowing will be measured by reference to the rate of inflation. Correspondingly, the standard requires companies to show holding gains of the period net of inflation, that is, real holding gains.

Providing a firm has net borrowings, both SSAP No. 16 and CCA-1 require any gain or loss on borrowing to be measured by

a gearing adjustment. This gearing adjustment measures the gain or loss on borrowing by reference to changes in the specific prices of the assets owned by the firm. By restricting the gearing adjustment to holding gains which have been realized in the current period, SSAP No. 16 results in a gearing adjustment which lacks rational interpretation. By applying the current gearing proportion to holding gains made in the current period, CCA-1 produces a more defensible figure.

Two major problems seem in need of resolution. First, in attempting to measure the current cost profit of the entity, should monetary working capital be included as part of the entity? The FASB standard does not do so, but both SSAP No. 16 and CCA-1 do so in somewhat different ways.

Second, how should the gain or loss from borrowing be measured? Given the limitations of the SSAP No. 16 approach, two alternatives must be considered. Either the gain or borrowing is measured by reference to a general index movement and shows separately the real holding gains of the period. This is the approach of FASB Statement No. 33. Alternatively, we may link the net borrowings with the specific assets which they have been used to finance. In this case, the gain or loss on borrowing is measured by reference to the changing values of the assets, that is, the holding gains made in the period. This is the approach of CCA-1.

Under the first of the alternative approaches, two companies with the same borrowings would show the same gain on borrowing in a period of inflation; under the second approach, they may report very different gains or losses.

The former approach seems to have much to commend it. In particular, it moves the bottom-line profit figure, "profit attributable to the shareholders," toward the concept of real capital maintenance which is arguably of greater relevance than the maintenance of physical capital when attempting to measure the increase in the underlying wealth of the shareholders during a period.

The three standards are experimental, and it will be interesting to see what changes are made to each when the experimental periods expire.

# *Current Status of Accounting Education in Saudi Arabia*

ADNAN M. ABDEEN and UGUR YAVAS*

With its huge oil reserves, Saudi Arabia is one of the evolving economic powers in the world. The remarkable growth in the national level of international trade and in domestic industrial activity within the past decade has drawn attention to accounting as a vital managerial function. Because Saudi Arabia represents an important market, a description of the status of accounting education in the country, as an antecedent to the development of the accounting profession, should be of interest to executives and academicians. This article discusses the current status in Saudi accounting education and offers possible avenues of change for improvement.

Since the publication of Enthoven's now-classic article, "The Accountant's Function in Development" in 1965, the role of accounting in economic development has received increased attention from students of accounting.[1] To date, several authors have discussed the deficiencies of accounting practices in developing countries and the adverse consequences such practices have on

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[1] Adolph J. H. Enthoven, "The Accountant's Function in Development," *Finance and Development* (December 1965), 211–16.

economic development.[2] A widely held belief is that if a country is to experience accelerated economic development and be able to deliver a higher standard of living to its citizens, a vitalization of the accounting profession and a development of qualified accounting talent are necessary.[3] The primary manner to achieve this vitalization and development is through indigenous formal accounting education.

The material presented draws on several sources, including personal interviews with accounting educators and government officials; reviews of the catalogs of Saudi universities offering programs in accounting; and the authors' observations as educators of the contemporary Saudi accounting scene.

## SIGNIFICANCE OF ACCOUNTING AND ACCOUNTING EDUCATION IN SAUDI ARABIA

Vitalization of the accounting profession and development of qualified accountants and auditors are all timely and important to the economic development of Saudi Arabia for a least five reasons: (1) the number and size of companies have increased, (2) oil revenues have grown, (3) a shortage of local accounting skills exists, (4) the formalization of a national stock exchange is underway, and (5) changes in auditing certification requirements have been proposed.

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[2] See, for example, David F. Linowes, "The Role of Accounting in Emerging Nations," *Journal of Accountancy* (January 1969), 18; M. A. Qureshi, "Private Enterprise Accounting and Economic Development," *International Journal of Accounting* (Spring 1974), 125–41; H. P. Holzer and D. Tremblay, "Accounting and Economic Development: The Case of Thailand and Tunisia," *International Journal of Accounting* (September 1973), 62–80; Utomo Josoderdjo, "The Accounting Profession in Indonesia," *SGV Group Journal* (No. 4, 1976), 10–19; and R. Juchau, "Accounting Practice Problems in Papua New Guinea and Fiji," *Australian Accountant* (March 1978), 11.

[3] See, for example, Lee J. Seidler, "Accounting and Economic Development: The Turkish Experience" (Ph.D. dissertation, Columbia University, 1966); George M. Scott, "Private Enterprise Accounting and Developing Nations: Economic Evaluation Accounting" (D.B.A. dissertation, University of Washington, 1967); Ahmed Abdul Kader Shinawi, "The Role of Accounting and Accountants in the Developing Economy of Saudi Arabia" (D.B.A. dissertation, University of Southern California, 1970); Adnan M. Abdeen, "The Role of Accounting in the Economic Development of Syria" (D.B.A. dissertation, Mississippi State University, 1974); Mohamed Ali Mirghani, "The Role of Accounting in the Economic Development of Developing Countries: The Case of Sudan" (D.B.A. dissertation, Indiana University, 1979); and Merrill E. Cassell, "Economic Development Accountancy," *Management Accounting — Journal of the Institute of Cost and Management Accountants* (May 1979), 23–24.

**Increase in Number and Size of Companies**

Until the emergence of the Saudi oil industry, the Saudi society was basically engaged in primitive agriculture, fishing, and the Hajj (pilgrimage) trade. The little trade and commerce that existed were dominated by small, individually owned establishments.[4] Their inventories were small and the pace of trade was slow. One person could handle all business activities without help. If and when assistance was needed, the owner employed close relatives, usually as unpaid help. Owner-managers felt little need to keep accounting records. When they did, these records were primitive and on a single-entry basis.[5] The trend in the Saudi economy today, however, is toward formation of large private and public corporations. As Exhibit 1 indicates, the number and total capital of companies in Saudi Arabia showed substantial increases between 1973 and 1983. The number of companies increased from 959 to 5,638, and the size of those companies, as measured by their average capital, increased almost 7.5 times in the same period. The separation of management and ownership in these large

**Exhibit 1. Number of Companies and Their Invested Capital in Saudi Arabia, 1973–1983**

| Year | Number of companies* | Capital (SR 000) | Average capital (SR 000)† |
|---|---|---|---|
| 1973 | 959 | 1,339,712 | 1,397 |
| 1974 | 1050 | 1,643,143 | 1,565 |
| 1975 | 1181 | 2,209,321 | 1,870 |
| 1976 | 1473 | 7,032,258 | 4,774 |
| 1977 | 1866 | 20,746,956 | 11,118 |
| 1978 | 2694 | 24,553,175 | 9,114 |
| 1979 | 3460 | 31,710,406 | 9,165 |
| 1980 | 4089 | 34,955,528 | 8,549 |
| 1981 | 4588 | 42,818,515 | 9,333 |
| 1982 | 5027 | 54,471,304 | 10,836 |
| 1983 | 5638 | 58,961,177 | 10,458 |

* Companies include partnerships and corporations.
† Exchange rate: SR 3.6 = US$ 1.00.
**Source:** Compiled from Ministry of Finance and National Economy, Central Department of Statistics, Saudi Arabia, *Statistical Year Book*, Vol. 14, 1398 AH (1978 AD), 368; Ministry of Finance and National Economy, Central Department of Statistics, Saudi Arabia, *Statistical Year Book*, Vol. 16, 1400 AH (1980 AD), 426; and Ministry of Finance and National Economy, Central Department of Statistics, Saudi Arabia, *Statistical Year Book*, Vol. 19, 1403 AH (1983 AD), 505.

[4] Ramon Knauerhase, *The Saudi Arabian Economy* (New York: Praeger Publishers, 1975), 136.
[5] Shinawi, "The Role of Accounting," 37.

companies necessitates application of accounting techniques to control the resources entrusted to them and to run such large organizations effectively and efficiently.

### Growth in Oil Revenues

Despite the drop in the average daily production of crude oil within the past few years, the unusual rate of oil production of the 1970s and early 1980s, coupled with the increase in oil prices at the time, led to the accumulation of massive financial assets in Saudi Arabia (see Exhibit 2). Because domestic productive capacity could be expanded at the growth rate of oil revenues, these funds had to be invested abroad. Selection of the right investment targets and forms and the amounts to be invested in each depends on an understanding of modern finance and accounting skills.

### Shortage of Local Accounting Skills

The rapid changes in the Saudi economy have caused dramatic shortages in the labor market for skilled manpower, including accountants. This has resulted in the employment of a growing number of expatriate accountants by Saudi companies. The Saudi government, in an attempt to reduce dependence on expatriate

**Exhibit 2. Saudi Arabia Oil Production and Revenue 1971–1984 (In Millions)**

| Year | Annual production (U.S. barrels) | Daily average (U.S. barrels) | Annual revenue (U.S. $) |
|---|---|---|---|
| 1971 | 1,740.6 | 4.8 | 1,884.9 |
| 1972 | 2,202.0 | 6.0 | 2,744.6 |
| 1973 | 2,772.6 | 7.6 | 4,340.0 |
| 1974 | 3,095.1 | 8.5 | 22,573.6 |
| 1975 | 2,582.5 | 7.1 | 26,676.2 |
| 1976 | 3,139.3 | 8.6 | 30,747.5 |
| 1977 | 3,357.9 | 9.2 | 36,540.0 |
| 1978 | 3,038.0 | 8.3 | 32,234.0 |
| 1979 | 3,479.2 | 9.5 | 48,435.0 |
| 1980 | 3,623.8 | 9.9 | 84,466.0 |
| 1981 | 3,586.0 | 9.8 | 101,813.0 |
| 1982 | 2,367.0 | 6.5 | 70,478.6 |
| 1983 | 1,668.0 | 4.6 | 46,100.0* |
| 1984 | 1,512.0 | 4.1 | 43,700.0* |

* = Estimate

**Source:** Compiled from Saudi Arabian Monetary Agency, *Annual Report*, 1397 (1977), 17 and 19 (Arabic); *Annual Report*, 1401 (1981), 22 (Arabic); Ministry of Petroleum and Minerals, *Petroleum Statistical Bulletin*, 1979, 17; Saudi Arabian Monetary Agency, *Statistical Summary*, 1404 (1984), 32 (Arabic); Saudi Arabian Monetary Agency, *Statistical Summary*, 1405 (1985), 24 and 68; OPEC, *Annual Statistical Bulletin* (1984), 34; and ARAMCO, *Facts & Figures* (1984), 18.

manpower, initiated projects to educate people both domestically and internationally. While the policy of sending students abroad to close the existing national educational gap is commendable, its effectiveness in transmitting accounting skills into Saudi Arabia should be viewed with caution. This is because accounting practices are greatly influenced by the local, legal, institutional, and other environmental factors, which foreign education programs rarely consider.[6] Thus, a Saudi-oriented approach to accounting education is needed to deal effectively with the varied accounting needs of the developing Saudi economy.

**Possible Formalization of Stock Exchange**

Currently, the transfer or sale of stock in Saudi Arabia is conducted through local banks or through direct contacts between buyers and sellers. The current system suffers from several deficiencies. Normally, at least two weeks are required for a cash settlement of a transaction, a situation which hinders the advantage of the immediate liquidity of the marketable securities. In addition, financial and non-financial information does not reach the public in a timely and efficient manner. The Saudi government considered the establishment of a formal stock exchange and commissioned several studies that have been completed.[7] The number of corporations whose shares are traded currently is quite small (approximately forty corporations), and the volume is also small (approximately 50,000 to 100,000 shares in 200 to 250 weekly transactions). The government, as well as the public, fears the lack of effective controls in a stock exchange which might lead to its collapse. The need for a better method to exchange stock still persists. A new development which might improve the information problem is the newly adopted generally accepted accounting and auditing standards and standards of professional ethics. These standards, which were published in early 1986 as a result of a multi-year study, were adopted by the Ministry of Commerce. The ministry requested auditors to comply with the new standards immediately. This compliance should enhance the reliability of the financial statements of the corporations.

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[6] Ugur Yavas and D. Rountree, "The Transfer of Management Knowhow to Turkey through Graduate Business Education: Some Empirical Findings," *Management International Review* (No. 2, 1980), 71–78.

[7] See, for example, Abdin Ahmed Salama, "Establishing a Capital Market in Saudi Arabia," *Journal of the Faculty of Commerce*, Riyadh University (No. 5, 1976–1977), 13–23 (in Arabic); Riyadh Chamber of Commerce and Industry, *Financial Papers Bourse and Its Importance in Serving Incorporated Companies*, Research Series, 1980 (in Arabic); and Mary Jo McConahay, "A Saudi Capital Market," *Saudi Business* (No. 22, 1979), 26–30.

**Proposed Changes in Auditing Certification Requirements**

The certification requirements of Royal Decree (No. M/43) of 1974, which is still in effect, makes it difficult and unattractive for Saudi nationals to become public and certified accountants. According to this decree, a Saudi must join a certified public accountant's office on a full-time basis for three or four years (depending whether his bachelor's degree is in accounting or in business) of training before becoming a public accountant. To become a certified accountant, the public accountant must pass an examination administered by the Supreme Commission for Certified Accounting. Further, a certified accountant is not permitted to certify the financial statements of corporations unless he has practiced accounting and auditing in his own office for a period of three years (five years for certifying banks and public organizations) after certification. For Saudis, the opportunity cost to meet these requirements is too high.

In 1981, a proposed decree called for the elimination of the examination and the training period requirements for certification.[8] This decree was not approved and in early 1986, a new proposal was made to organize the auditing profession in harmony with the generally accepted accounting and auditing standards and standards of professional ethics. The new proposal, which is under serious consideration, calls for the establishment of the Saudi Institute of Certified Public Accountants (SICPA) and limits the entry to the auditing profession to Saudis who hold accounting or business degrees and who are members of SICPA. To become a member of SICPA, attendance at formal seminars and the passing of official examinations are required. Presently, practicing certified auditors must comply with the continuing education requirement of the profession to maintain a valid license. The proposal also limits the entry to the auditing profession to those who actually practice auditing and who comply with the principles, standards, and procedures of the profession.[9]

Because of these changes in the regulations, higher professional standards are expected to prevail and to be practiced by competent members of the profession. This expectation places an obvious need for the development of sophisticated theoretical and practical accounting education on Saudi colleges and universities.

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[8] Ministry of Commerce, "Proposed Regulations for Certified Accountants," Article 3, n.d.

[9] Office of Abdul-Aziz Al-Rashid, Certified Public Accountants, "Development of Accounting and Auditing Profession — Internal Organization of the Profession — Second Stage," n.d., 28–32.

## CURRENT STATUS OF ACCOUNTING EDUCATION

### Institutions

Interest in higher education in general and business education in particular is a relatively recent phenomenon in Saudi Arabia. The College of Administrative Sciences (initially known as the College of Commerce) at King Saud University (KSU), located in the capital city of Riyadh, was the first institution of higher education to offer a business curriculum in Saudi Arabia. Instruction at this institution began in the fall of 1959. KSU now offers accounting education in its Kasim campus as well. The opening of the College of Commerce at KSU was followed by the establishment of the College of Economics and Administration at King Abdul Aziz University (KAU) in 1967. A recent entry into the Saudi business education system is the College of Industrial Management at the University of Petroleum and Minerals (UPM) in Dhahran in 1974.

The medium of instruction at KSU and KAU is Arabic and at UPM is English. All three Saudi institutions with business curricula offer undergraduate majors in accounting. All three offer graduate courses in accounting. The masters degree program at KAU, which began in the 1976/1977 academic year, requires eighteen credit hours in accounting and eighteen credit hours in business and economics. The master's degree program in accountancy at KSU was initiated in the 1985/1986 academic year and requires twenty-seven credit hours in accounting and fifteen credit hours in business and economics. Students are required to take two accounting courses in the MBA program offered at the University of Petroleum and Minerals, with an option to take three more advanced accounting courses for a concentration in accounting.

UPM is an all-male institution. The student bodies of the other two universities are also predominantly male. At KSU and KAU, however, courses are also offered to undergraduate female students. Because of the segregation of the sexes in the country, courses offered to female students at KSU and KAU are arranged through the universities' extension centers or through closed circuit television systems. In this context, it should be added that, due to social objections, women in Saudi Arabia are not allowed to work in offices where men work or in jobs in which they will be in contact with men. The growth of women's banking in the country, as epitomized by the opening of several "for women-only" branches by the banks and the money exchangers, indicates, however, that

female graduates in economics, finance, and accounting will be in demand.[10]

Selected aspects of the Saudi universities offering degree programs in business administration with major or concentration in accounting are summarized in Exhibit 3.

### Faculty

Exhibit 4 presents a profile of the full-time accounting faculty in Saudi universities by educational qualification, rank, and nationality. The exhibit indicates that, of the forty-nine full-time accounting faculty who currently teach at Saudi universities, thirty-nine hold doctorates and ten hold master's degrees. The faculty with doctorate degrees hold the rank of professor (four faculty), associate professor (fifteen), and assistant professor (twenty). The faculty with master's degrees serve as lecturers.

A shortage of qualified indigenous manpower exists at all levels in Saudi Arabia. The shortage also manifests itself in the composition of accounting faculty by nationality. More than one-half of the accounting faculty in the Kingdom are non-Saudis. Although Egyptians represent the primary nationality group teaching at the Arabic-speaking universities, Americans dominate the relatively small accounting faculty at the English-speaking UPM.

The majority of Saudi faculty with doctorates employed by KSU and KAU were trained in the United States. Similarly, the non-Saudi faculty at UPM and KSU received their degrees from North American universities. The non-Saudi faculty at KAU, on the other hand, were educated in Europe (England and France), Egypt, and the United States.

The diversity in the backgrounds of accounting faculty contributes to the teaching of a variety of courses in accounting principles, as well as auditing standards and procedures. The accounting systems, methods, and techniques taught are oriented toward the accounting environment of the country in which the degree is obtained. This is a serious shortcoming of the accounting education in developing countries because training geared to the wrong environment leads to the tragic waste of the talents of young accounting students attending local universities. They find themselves recreating the basic accounting system, records, and reports

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[10] See, for example, "Saudi Arabia: Women Edge Forward," *Middle East* (May 1982), 34; and "Arab Women Break into Banking," *Middle East* (October 1982), 68.

**Exhibit 3. Selected Aspects of Saudi Universities Offering Degree Programs in Business Administration**

| Aspect | King Saud University<br>College of Administrative Sciences | King Abdul Aziz University<br>College of Economics and Administration | University of Petroleum and Minerals<br>College of Industrial Management |
|---|---|---|---|
| Date of establishment | 1959 | 1967 | 1974 |
| Location | Riyadh | Jeddah | Dhahran |
| Availability of accounting major | Yes | Yes | Yes |
| Availability of graduate courses in accounting | Yes | Yes | Yes |
| Student body | Male<br>Female (through extension service) | Male<br>Female (through extension service) | Male only |
| Medium of instruction | Arabic | Arabic | English |

**Exhibit 4. Characteristics of Full-Time Accounting Faculty (1985–1986)**

| | Educational qualification | | Rank | | | | Nationality | |
|---|---|---|---|---|---|---|---|---|
| Institution | Doctorate | Master | Professor | Associate professor | Assistant professor | Lecturer | Saudi | Non-Saudi |
| King Saud University | 17 | 1 | 1 | 5 | 11 | 1 | 9* | 9 |
| King Abdul Aziz | 16 | 9 | 3 | 6 | 7 | 9 | 15 | 10 |
| University of Petroleum and Minerals | 6 | — | — | 4 | 2 | — | — | 6 |
| Total | 39 | 10 | 4 | 15 | 20 | 10 | 24 | 25 |

* Five of the Saudi accounting faculty members are on loan to other organizations.

in the local environment, which is quite different than the one in which they are educated.[11]

In Saudi Arabia, an additional factor which creates difficulty for the foreign faculty to relate classroom teaching to the Saudi environment is that Saudi regulations severely limit external consulting for a fee by foreign faculty. Consulting as a form of service to external industry is allowed only when the arrangement is between the university and the client with the faculty member assigned to the project by the university.[12] However, faculty members have the opportunity to participate in forums, seminars, and executive training programs which provide them with some contact with the business and accounting environments.

### Curricula and Courses

The general characteristics of the undergraduate accounting major programs of the three Saudi universities are presented in Exhibit 5. To receive a major in accounting, students must complete requirements in three areas: general education, business/economics, and accounting. At UPM, students are additionally re-

**Exhibit 5. Undergraduate Accounting Programs**

| Requirement | King Saud University | | King Abdul Aziz University | | University of Petroleum and Minerals | |
|---|---|---|---|---|---|---|
| | Credit hours | % | Credit hours | % | Credit hours | % |
| General education | 22 | 17.5 | 32 | 25.0 | 48 | 36.0 |
| Co-op | — | — | — | — | 9 | 7.0 |
| Business/economics except accounting | 51 | 40.5 | 49 | 38.0 | 48 | 36.0 |
| Accounting | | | | | | |
| Compulsory | 41 | | 39 | | 27 | |
| Elective | 12 | | 9 | | 0 | |
| Sub-total | 53 | 42.0 | 48 | 37.0 | 27 | 21.0 |
| Total | 126 | 100.0 | 129 | 100.0 | 132 | 100.0 |

**Source:** King Saud University, *College of Administrative Sciences, Student Guide* (Arabic) (Safar, 1405 H, 1985), 7–16; King Abdul Aziz University, *Academic Bulletin* (April 1985), 74–75 and 82–83; and University of Petroleum and Minerals, *Undergraduate Bulletin* (March 1985), 95–97.

[11] H. P. Holzer and J. S. Chandler, "A Systems Approach to Accounting in Developing Countries," *Management International Review* (No. 4, 1981), 26.

[12] *The Quest for Excellence* (Dhahran, Saudi Arabia: University of Petroleum and Minerals, 1979), 13.

quired to complete successfully a co-op program which requires an internship in a company either in the Kingdom or abroad.

Some tentative conclusions can be advanced based on the percentage breakdown of a student's credit hours among the requirement areas. First, the accounting curricula of the two Arabic speaking universities (KSU and KAU) do not adequately provide the students with a general education that would give them a broader background. Such a general education could enable the students to respond to the needs of the economy and society more readily and help them cope with the changes in the environment.

Second, UPM is the only university whose curriculum requires practical training. While UPM's co-op program is quite valuable to the students in helping them to blend their classroom learning with real world experiences, it nevertheless does not guarantee that a student majoring in accounting will receive accounting training in a certified public accounting firm or in the accounting department of a private or public organization.

Third, students are required to take an adequate number of credit hours in accounting at all three universities.

Exhibits 6 and 7 provide detailed breakdowns of required and elective accounting courses offered at both undergraduate and graduate levels by the Saudi universities. The mix of course offerings does not appear to be evenly distributed among the Saudi institutions. Further, no consistency exists among the institutions regarding whether a particular course is considered "required" or "elective." Despite these differences, some similarities exist among the three universities. For instance, in all three, the emphasis is on methods and procedures (bookkeeping aspect) rather than on theory. Additionally, the role of accounting in economic, social, and legal developments and its interdisciplinary aspects are not emphasized. It should also be added that while some courses do appear in the catalogs, they are not offered on a regular basis. As can be inferred from these observations, the similarities among the institutions are unfortunately nothing but common deficiencies.

### Methods of Instruction

By far the most common method of accounting instruction in Saudi business schools is the lecture method. This is partly due to the training of most faculty who are accustomed to using this method. The lecture method essentially results in one-way communication and, hence, does not engender a good learning environment for students. Students' study and learning habits become passive, mechanical, and tend to focus on description and tech-

**Exhibit 6. Undergraduate Accounting Courses Offered by Saudi Universities with Accounting Programs**

| Title of the course | King Saud University | | King Abdul Aziz University | | University of Petroleum & Minerals | |
|---|---|---|---|---|---|---|
| | Credit hours | Required or elective | Credit hours | Required or elective | Credit hours | Required or elective |
| Principles of Accounting | 6 | R | 6 | R | 6 | R |
| Partnership Accounting | | | 3 | R | | |
| Corporate Accounting | | | 3 | R | | |
| Accounting of Financial Institutions | 3 | R | 3 | E | | |
| Zakat Accounting | | | 2 | R | | |
| Cost Accounting I | 3 | R | 3 | R | 3 | R |
| Governmental Accounting | 3 | R | 3 | R | | |
| Tax Accounting | 3 | R | 3 | R | | |
| Cost Accounting II | 3 | E | 3 | R | | |
| Auditing I | 3 | R | 3 | R | 3 | R |
| Petroleum Accounting | | | 3 | R | | |
| Auditing II | 3 | E | 3 | R | | |
| Managerial Accounting | 3 | R | 3 | E | 3 | R |
| Research Project | 2 | R | 2 | R | | |
| Accounting Theory | 3 | R | | | 3 | R |
| Uses of Computer in Accounting | 3 | E | | | | |
| International Accounting | 3 | E | | | | |
| Accounting Systems | 3 | R | | | 3 | R |
| Selected Topics in English | 3 | E | | | | |
| Contemporary Accounting Issues | 3 | E | | | | |
| Applied Financial Accounting | | | 2 | R | | |
| Financial Statement Analysis | 3 | E | 3 | E | | |
| Advanced Accounting | 3 | R | | | | |
| Accounting Systems in Islam | | | 3 | E | | |
| Governmental Accounting Audit | | | 3 | E | | |
| Applied Accounting | 3 | E | 3 | E | | |
| Intermediate Accounting I | 3 | R | | | 3 | R |
| Intermediate Accounting II | 3 | R | | | 3 | R |

**Source:** King Abdul Aziz University, *College of Economics and Administration Bulletin* (1985), 75–83; King Saud University, *The College of Administrative Sciences Student Guide* (1985), 16; and University of Petroleum and Minerals, *Undergraduate Bulletin* (1985), 96 and 133.

niques. The students do not approach the analysis of the facts and ideas in a meaningful way and so the development of their problem-solving skills is impaired. Such deficiencies in the intellectual growth of the Saudi students become of paramount importance because the Saudi secondary school education system, like its counterparts

**Exhibit 7. Graduate Accounting Courses Offered by Saudi Universities with Graduate Accounting Programs**

| Title of the course | King Saud University | | King Abdul Aziz University* | | University of Petroleum & Minerals† | |
|---|---|---|---|---|---|---|
| | Credit hours | Required or elective | Credit hours | Required or elective | Credit hours | Required or elective |
| Accounting Theory | 3 | R | 3 | R | 3 | E |
| Managerial Accounting | | | 3 | R | 3 | R |
| Behavioral Approaches in Accounting | 3 | E | 3 | E | | |
| Public Accounting | | | 3 | E | | |
| Social Accounting | | | 3 | E | | |
| Costing Theory | | | 3 | E | | |
| Cost Analysis and Control | | | 3 | E | | |
| Auditing: Cases and Investigation | | | 3 | E | | |
| Accounting Systems in Islam | | | 3 | E | | |
| Zakat and Taxation | | | 3 | E | | |
| Accounting Information Systems | 3 | R | | | 3 | R |
| Auditing | 3 | R | 3 | R | 3 | R |
| Financial Accounting | | | | | 3 | R |
| International Accounting | 3 | E | | | 3 | E |
| Seminar in Financial Accounting | | | | | 3 | E |
| Seminar in Managerial Accounting | | | | | 3 | E |
| Independent Reading/ Research | 3 | R | | | 1-3 | E |
| Advanced Managerial Accounting | | | | | 3 | R |
| Studies in Professional Accounting Practice | 3 | E | | | | |
| Studies in Fund Accounting | 3 | R | | | | |
| Studies in Controllership | 3 | R | | | | |
| Internship | 3 | R | | | | |
| Studies in Contemporary Issues in Accounting | 3 | R | | | | |

* The student may take three elective courses (9 credit hours) in lieu of thesis.
† UPM offers a master's degree in Business Administration with a concentration in Accounting.
**Source:** King Saud University, *Programme of Master of Accountancy*, n.d., 2; King Abdul Aziz University, Faculty of Economics and Administration, *Graduate Studies Program* (1985); and University of Petroleum and Minerals, *Master of Business Administration Program* (1985), 3–12.

in other Middle Eastern countries, still emphasizes learning by rote.[13]

A need exists to provide an active learning environment, which

[13] "Staying the Course," *Middle East* (June 1982), 41–43.

injects realism into accounting education, in Saudi Arabia. This can be achieved through the use of cases, practice sets, laboratory sessions, and computer-augmented accounting sessions. The implementation of some of these active teaching methods, however, becomes difficult, especially in the two Arabic-speaking universities, where high student-teacher ratios exist. While the nearly 100-student-per-faculty ratio at King Abdul Aziz University and the 50-student-per-faculty ratio at King Saud University are not too high by Middle East standards, the large class sizes nevertheless present major problems in effectively supervising practice sets, labs, and computer sessions.[14]

Currently, laboratory sessions are used by all three universities. However, practice sets are utilized only at UPM, where a computerized accounting simulation is used in the accounting principles course. While the low student-teacher ratio at UPM is conducive to the implementation of case discussions, the lack of original cases related to Saudi Arabia poses a problem. The non-availability of cases, textbooks, and other reading materials related to the Saudi business environment still remains a serious problem facing accounting education in Saudi Arabia.

Practically all of the twenty-five accounting and auditing books selected for use by the accounting department at King Saud University are Egyptian textbooks. At King Abdul Aziz University, although most textbooks are of Egyptian origin, two principles of accounting and one governmental accounting textbook are authored by Saudi professors.[15] A wide disparity exists in the quality of these texts, and a critical review suggests that they deal with Egyptian business, social security, tax laws, and auditing and accounting standards, which differ from those practiced in Saudi Arabia. At UPM, American textbooks are widely used. Both the Arabic and American textbooks suffer from the same problem, however: they are not written with Saudi Arabia in mind. Continued reliance on foreign sources naturally hinders the progress of an indigenous accounting education.

Currently, few publications concerning aspects of accounting in

[14] For a description of student-teacher ratios in other Middle Eastern countries, see Mustafa Aysan and Kemal Kurtulus, *A Research Report on the Status and Prospects of Management Education in Turkey* (Istanbul: Turkish Management Foundation, 1973); and Adnan M. Abdeen, "The Role of Accounting in Economic Development of Syria," 131–33.

[15] See Muhia Al-Din Tarabzouni, *Accounting Principles Part 1* (Cairo: Makour Press, 1397 AH); *Accounting Principles Part 2* (Cairo: Makour Press, 1398 AH); and *Government Accounting* (Jeddah, 1400 AH).

Saudi Arabia are written in English.[16] Although these publications are useful references for researchers, their value to students is questionable because of the lack of an adequate command of English by the majority of students. As the students' command of English improves, they may benefit from two English-Arabic dictionaries. One by Talal Abu-Ghazaleh includes entries related to business law and auditing, in addition to accounting terms. The dictionary by Adnan Abdeen not only includes terms but also provides explanations, examples, and illustrations.[17] As far as journals are concerned, there are three general business journals in Saudi Arabia. They are published by KSU, KAU, and the Institute of Public Administration.[18] The accounting articles published in English and Arabic in these journals provide a forum for academicians and professionals to exchange views on matters of professional interest. However, they are few in number.

The formation of the Saudi Accounting Society in Riyadh and a branch of the Institute of Internal Auditors, Inc., in Dhahran may enhance the publication of articles, pronouncements, and other research literature related to the accounting and auditing professions in Saudi Arabia.

## STUDENTS AND THE IMAGE OF ACCOUNTING

Students are admitted to state-owned Saudi universities on the basis of achievement scores on the General Secondary School Certificate examination. The University of Petroleum and Minerals additionally requires candidates to sit for the UPM Entrance Examination, which is administered in the major cities of Saudi Arabia every summer. The trend has been that students with the highest scores on these exams prefer to enter engineering, medicine, and the physical sciences.[19] Students with somewhat lower

[16] Ahmed Abdul Kadir Shinawi and William F. Crum, "The Emergence of Professional Public Accounting in Saudi Arabia," *International Journal of Accounting* (Spring 1971), 110; Salih Mahmoud Jadallah, "Performance Auditing and Program Evaluation in Government — Saudi Arabia As a Field of Application" (Ph.D. dissertation, Texas Tech. University, 1978); and Adnan M. Abdeen and John Meredith, *Payroll Accounting in Saudi Arabia* (Jeddah: Saudi Publishing House, 1986).

[17] Talal Abu-Ghazalah, *English-Arabic Dictionary of Accountancy* (London: Macmillan Press Ltd., 1978); and Adnan M. Abdeen, *English-Arabic Dictionary of Accounting and Finance* (Chichester: John Wiley & Sons Ltd., 1981).

[18] The three journals are (1) *Journal of the Faculty of Commerce*, King Saud University, published by King Saud University Libraries; (2) *Journal of Economics and Administration*, published by Research and Development Center, King Abdul Aziz University; and (3) *Public Administration Magazine*, published by the Institute of Public Administration, Riyadh, Saudi Arabia.

[19] "Arts vs. Sciences," *Middle East* (May 1982), 33–34.

scores select business administration/economics. The remaining students prefer the humanities and the liberal arts.

Preference for engineering and sciences by the high achievers is attributed to the high prestige accorded to these fields in the Middle East in general and in Saudi Arabia in particular. However, the engineering field is losing ground to business and computer science. In addition, the relative easiness of liberal arts education is claimed to be its major appeal to the students. Expressing his concern over the trend toward liberal arts education, a Saudi educator commented that one does not need to be a professional to be successful in Saudi Arabia and that too many students were selecting the easy route.[20] Although the results of a study do not agree with the view that the ease of study in a field is a major factor in a Saudi student's major area choice decision, the prestige/social status accorded to the field definitely is an important factor.[21]

The relative unpopularity of accounting in Saudi Arabia can be partially explained by the low prestige accorded to professionals in that field. As in other developing countries,[22] accountants in Saudi Arabia do not appear to enjoy the time-honored prestige of such professionals as medical doctors, engineers, and college professors. For instance, in a survey completed in early 1982, a sample of Saudi students rated accountants much lower than other business and management professionals. The relative ranking of accountants was a discouraging twenty-one among a total of forty occupations included in the survey.[23]

In addition to the prestige element, another factor which has traditionally inhibited Saudi students from choosing accounting as a career is the relatively low salary offered to accountants in Saudi Arabia.[24] This situation, however, has been improved recently. Now accounting graduates enter one step higher on the government pay scale compared with other newly hired college graduates. Whether the improvement in pay will lead to an increase in desirability of accounting as a career choice is still to be determined.

[20] Ibid., 34.

[21] Mehmet Tahir and Ugur Yavas, "Guidance Needed to Develop Economic Skills," *Saudi Business* (No. 49, 1982), 44.

[22] See, for example, Ugur Yavas, Anthony J. Alessandra, Barnett A. Greenberg, and Alberto Block, "Attitudes of Turkish and Mexican Students toward Marketing: Implications for International Marketing Education," in *Marketing 1976–1977 and Beyond*, ed. Kenneth L. Bernhardt (Chicago: American Marketing Association, 1976), 103.

[23] Mehmet Tahir and Ugur Yavas, "The Prestige of Occupations in the Kingdom," *Saudi Business* (No. 47, 1982), 21.

[24] Shinawi and Crum, "Emergence of Accounting," 110.

What probably still needs to be done to attract more students to the accounting area is to improve the attitudes of high school and college students toward accounting. Factors in addition to pay and prestige appear to affect students' perceptions of a field, and faculty may be instrumental in reshaping these perceptions.[25]

## CONCLUSIONS

The immediate prospects of accounting education in Saudi Arabia appear bleak. The number and quality of accounting programs offered by Saudi universities are inadequate. Although for the most part the faculty in these institutions have the necessary educational qualifications, most of them lack essential knowledge of Saudi economic, business, and social environments. Further, the diversity in the educational background of all faculty members contributes to the teaching of diverse principles and techniques. The lecture method is the most common method of accounting instruction. Emphasis on classroom discussions, practice sets, and computer-augmented accounting is lacking. The accounting students receive instructions on Eyptian, British, and American practices, and they must adapt them to the Saudi environment after completing their studies. Additionally, accounting does not appear to be a popular field, at least among the bright Saudi college students.

Therefore, changes in several areas are needed. The following recommendations are offered as possible solutions to the current deficiencies in accounting education in Saudi Arabia.

1. Emphasis should be placed on modern accounting concepts and techniques suitable to the Saudi environment. Issues such as social accounting, environmental changes, pollution, uses of natural resources in industry, inflation, and other contemporary issues should be taught from an accounting point of view.
2. Graduate education in accounting should be developed and promoted to accelerate research activities. The Master of Accounting degree is considered adequate in the short run.
3. More Saudis should be encouraged to pursue higher education leading to a terminal accounting degree to reduce the number of the non-Saudi faculty. This would provide a stable faculty base to implement graduate programs in the country.
4. Faculty members should be encouraged to remain current with

[25] Ugur Yavas, "Attitudinal Orientations as Inputs for Improving Images of Educational Fields," *Finnish Journal of Business Economics* (No. 2, 1981), 151.

new developments in the accounting field by attending international conferences, taking sabbatical leaves, and applying for research grants. As a result, more books, articles, cases, and other materials on accounting in Saudi Arabia may be published.

5. Limited consulting activities to all faculty (Saudi and non-Saudi) should be encouraged.
6. At least in the short run, part-time faculty from industry should be actively recruited to bridge the gap between classroom teaching and the real world.
7. Students should be required to have some practical experience in public or private accounting before they complete their educational programs.
8. Efforts among universities in curricula design, book writing, and development of other teaching materials should be coordinated through regular meetings.

These are but a few of the avenues which might enhance the quality of accounting education in Saudi Arabia. The sooner these steps are taken, the sooner Saudi Arabia will have the accounting talents so crucial to its economic development.

# *Index of Volumes 19 and 20 by Author's Name and by Subject Area*

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**AUTHOR INDEX**

## SUBJECT INDEX

### Accounting Theory

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All manuscripts submitted for consideration should be typed on 8½ x 11" paper and should be double-spaced throughout, including synopsis, footnotes, and bibliography. At least two copies should be submitted for review. Margins should be appropriately wide to facilitate editing. The title of the paper, the author's name, rank, and affiliation, and any acknowledgments should appear on the first page of the body of the manuscript. All pages, as well as bibliography, exhibits, and appendices, should be serially numbered. The beginning of each paragraph should be indented. Footnotes may be placed either at the bottom of the appropriate page, or on a separate page. Each manuscript should be accompanied by a brief synopsis of the article explaining its international significance.

## HEADINGS

All major headings within the manuscript should be in capital letters. They should not be numbered. Subheadings should be in capital and lower case letters on a separate line beginning at the left margin. If third-level headings are used, they should begin at the left margin and should end with a period. The text will follow on the same line immediately.

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[1] William A. Dymsza, Multinational Business Strategy (New York: McGraw-Hill, 1972), 49-53.

[2] Geoffrey Holmes, "Replacement Value Accounting," Accountancy (March 1972), 4-8.

## BIBLIOGRAPHY

Manuscripts may include a bibliography at the end of the paper. If so, such references are not to be limited to those references cited in the text. Each entry should contain all data necessary for identification. Citations should be arranged in alphabetical order. Multiple works by the same author should be listed according to chronological order of publication. Examples are listed below.

Robert L. Aliber and Clyde P. Stickney. "Accounting Measures of Foreign Exchange Exposure — The Long and Short of It." Accounting Review, January 1975, pp. 44-57.

American Institute of Certified Public Accountants. Accounting Research Bulletin No. 43. New York: AICPA, 1953.

______. "Financial Statements Restated for General Price Level Changes." Statement of the Accounting Principles Board No. 3. New York: AICPA, 1969.

Leonard Lorensen and Paul Rosenfield. "Management Information and Foreign Inflation." Journal of Accountancy, December 1974, 98-102.

Lawrence Revsine. Replacement Cost Accounting. Englewood Cliffs, N.J.: Prentice-Hall, 1973.

## MATHEMATICAL NOTATION

Mathematical notation should be stated as simply as possible so as to simplify typesetting. Alignment should clearly indicate superscripts and subscripts. Equations which are numbered should have the numbers in parentheses flush with the right-hand margin.

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**Contents**



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**Contents**



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